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THE TECHNIQUE OF SOCIAL INVESTIGATION

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THE TECHNIQUE OF SOCIAL INVESTIGATION

BY

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THE TECHNIQUE OF SOCIAL INVESTIGATION

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F-O

TO MY WIFE

MARION WARREN FRY

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FOREWORD

This volume attempts to describe and to illustrate concretely certain elementary but basic issues connected with the task of making a dependable social study. It is intended primarily for the use of investigators who, like most graduate students, have had little or no experience with the actual problems of social inquiry. The discussions may also prove useful to executives who are interested in having investigations made for them and who want, therefore, to appreciate the chief issues involved.

The book is organized around the specific problem of initiating and carrying to completion a reliable inquiry. The treatment grows out of the first-hand experience of the Institute of Social and Religious Research which has spent several million dollars since 1921 supervising and financing scores of researches including the American village inquiries made under the direction of Dr. Edmund deS. Brunner; the city church studies of Dr. H. Paul Douglass; the investigation of "Middletown" by Dr. and Mrs. Robert S. Lynd; and the Character Education Inquiries of Doctors Hugh Hartshorne and Mark A. May. These and many other studies afforded an unusual opportunity for observing social investigators at work.

To broaden the scope of the book, the experiences of many other investigators and research agencies were tapped, but the volume does not pretend to be in any sense an exhaustive treatise on research. It is hoped, however, that the numerous references to standard texts

and especially the rather elaborate annotated bibliography at the end will enable the student to pursue further any special phase of the subject.

Many people cooperated in the preparation of this book, but the author feels a special sense of gratitude to Professor Robert E. Chaddock of Columbia University and to the staff of the Institute of Social and Religious Research for their suggestions and encouragement. He also wants to acknowledge his indebtedness to Mr. Charles Krevisky for his excellent research assistance and to Miss Marian Lucius of the University of Rochester who took complete charge of preparing the index and seeing the volume through the press.

C. L. F.

University of Rochester,
January, 1934

THE TECHNIQUE OF SOCIAL INVESTIGATION

"Men trip over molehills, not mountains."

—CONFUCIUS

Chapter I

PLANNING A STUDY

When you are faced with the task of making a study in the field of human society a whole series of problems present themselves. What kinds of information are already available bearing on the proposed investigation? What new bodies of pertinent data should be collected on the subject? How gather and analyze them? Will such an inquiry be worth the time and effort involved? These are the kinds of questions treated in this book.

The discussion is organized around the concrete problem of carrying to completion a dependable study. It starts with the importance of careful planning and then, after dealing with the major difficulties connected with the collection of social data, proceeds to treat a few basic questions that arise when analyzing and presenting the findings.

The various stages of a social investigation are so closely interrelated that it is difficult to discuss one step until you appreciate the others that follow. How plan a study until you know what bodies of data are available on your subject? It follows from this that the different chapters of this book cannot be considered as separate essays but rather as parts of a single unit. Indeed, the last chapter might well have served as an introduction rather than a conclusion to the volume, but it was put

at the end because it seemed wise to discuss certain general considerations only after a number of actual research problems had already been presented.

The subject matter of social inquiry is so varied that it may seem a hopeless task to treat problems of investigation in general. Research studies show the greatest diversity. One criticizes the contributions of certain European sociologists, another deals with the interrelationships of migration and business fluctuations, a third presents an agricultural survey of Siam, a fourth investigates immigrants and their children, and so on. Despite this variety, all investigations have fundamental elements which you need to appreciate before starting any particular study.[1]

Intellectual Honesty

What, then, are the chief factors to keep in mind when embarking upon a reliable inquiry? A prerequisite is the need for common honesty. Back of all objective investigation is an attitude of mind: a desire to face facts no matter where they lead. Throughout this discussion it is taken for granted that you are sincerely anxious to undertake a valid inquiry.

A genuine study of any subject demands gathering, classifying and analyzing all the facts; nothing can be taken for granted. To skim over a subject—"hitting the high spots"—is not enough, no matter how important these high spots may appear to be. Often the really significant materials are not the startling or obvious ones and to get the "whole truth" requires persistent

[1] Pearson, Karl, *The Grammar of Science* (London; Adam and Charles Black, 1911), p. 12.

digging. Facts must first be accurately observed, measured and recorded. Impressions, opinions, guesswork and casual conversations may, when properly analyzed, turn out to be important but you have to test them to make certain. Conclusions cannot safely be based on a few reports; usually it is necessary to make many observations. Always the facts must be arranged and verified, not merely added one upon another indiscriminately.[2]

A good example of a pseudo-scientific investigation has been described by an advertising expert who read book after book by dental authorities, not to learn about the care of teeth but for the sole purpose of "putting over" a certain tooth paste. He searched the literature until he found a reference to "mucin plaque" which gave him the idea of advertising his dentifrice as a creator of beauty by removing film or "mucin plaque." Obviously this is propaganda—not bona fide research.[3]

To be reliable and objective a study must be of such a character that other competent observers undertaking the same investigation will come to the same conclusions; that is, it must be open to verification by others. As a matter of fact, objectivity in many fields is difficult of attainment. A group of specialists may all concur in observations that turn out later to be false. There was a time when many intelligent people were positive they had seen witches but today we refuse to give credence to such "testimony." Even experts, tend-

[2] Giddings, Franklin H., *The Scientific Study of Human Society* (Chapel Hill, N. C.; The University of North Carolina Press, 1924), pp. 41-42.

[3] Kallet, Arthur, and Schlink, F. J., "Quackery in the Ads," *Advertising and Selling*, Vol. XIX, No. 9, September 1, 1932, p. 13.

ing to view a subject from fixed, sometimes false, premises, will "agree" on wrong interpretations. This is a danger that you must constantly guard against.

Importance of Planning

Assuming that your motives in undertaking a study are, like Caesar's wife, above suspicion, what, then, are the various steps to be followed when initiating a piece of research? The first is to visualize so far as possible all the major aspects of the study. Just as an architect prepares his blueprints before erecting a building, so you should develop detailed plans before commencing a study. Time spent in this way yields large returns. Weaknesses which arise from lack of thorough planning frequently cannot be corrected without retracing the whole research process.

Thus, some years ago a study collected opinions from hundreds of individuals who at the time were not adequately identified. When analyzing the testimony it became increasingly essential to know the experience and background of the different witnesses. As a result weeks were spent going back to get additional information about every person interviewed. Had the need for these identifying data been visualized from the start, this whole wasteful process could easily have been avoided.

Need for Purpose

There are many elements to be considered when planning a study but possibly the most essential is the need for a definite purpose. A constructive guiding aim is basic to intelligent inquiry; without it there is no

real research. The clearly defined purpose determines everything else—the method of approach, the data to be secured, the course of procedure. The more specifically you can visualize your objective the more direct your investigation is likely to be and the more evident your goal when it is reached. If your purpose is indefinite, broad and rambling, you have not sufficiently analyzed your problems and there has been a lack of clear thinking.[4]

Some people feel that since research is exploration, the journey should not be determined too precisely in advance. The obvious reply is that the man who sets out to do too many things or who is vague about the things he wants to do is unlikely to do anything well. The successful explorer settles upon his destination in advance and then lays his plans accordingly.[5] A concentrated attack upon a definite objective decîdedly increases the probability of success in any investigation.

The importance of starting with a definite aim does not mean that your original purpose must be slavishly followed without a change. Often it will grow naturally and develop with the progress of the inquiry. In other cases you may find it necessary, as the study proceeds, to modify your aims. For instance, Doctors Hugh Hartshorne and Mark A. May embarked some years ago

[4] Allen, E. W., "Need for Specific Objectives in Economic Research," *Journal of Farm Economics,* Vol. VIII, No. 1, January, 1926, p. 16.

[5] The same idea was expressed by John T. Merz when he pointed out that the successful scientific explorer is the man who can single out some special thing for minute and detailed investigation; who can retire with one definite object into his study or laboratory and there unravel its intricacies. *A History of European Thought in the Nineteenth Century* (London; Wm. Blackwood & Sons, 1896), Vol. II, p. 554.

upon an inquiry into character education. They soon discovered a disheartening lack of techniques for carrying on their study and decided, therefore, to delimit their inquiry to devising adequate methods of investigation.[6]

The mere fact, however, that the original aim may be modified does not obviate the need of clearly defined objectives. At every stage of your study you should know where you are going and why.

Purpose helps to determine virtually every aspect of any inquiry. Even the simplest facts and figures cannot be gathered intelligently until you appreciate the way in which the information will be used. For many years the Interstate Commerce Commission had been accustomed, as part of its other administrative duties, to collect information about various classes of railroad workers. Shortly after our entrance into the World War the Railroad Labor Board took over the function of regulating wages and working conditions and turned to the files of the Interstate Commerce Commission for necessary information. It was found that the materials so laboriously gathered were not applicable to the new situation, largely because the classifications employed were not sufficiently detailed. As a result the Railroad Labor Board had to collect its own figures on an entirely different basis.[7]

One form of purpose is expressed by the working hypothesis, which is simply a tentative generalization based upon observation or possibly upon a mere

[6] Hartshorne, Hugh, and May, Mark A., *Studies in Deceit* (New York; The Macmillan Company, 1928), p. 3.

[7] Wolman, Leo, "Fact Finding," *The New Republic,* Vol. XXXII, No. 407, September 20, 1922, p. 97.

"hunch." An hypothesis is the common starting point for an investigation although many significant social inquiries have begun without any particular theory to prove or disprove. For example, Dr. and Mrs. Robert S. Lynd made no attempt either in their field work or in their final report of *Middletown* to substantiate a thesis. Rather their object was to record observed phenomena as accurately as possible, thus raising fresh questions and suggesting possible new points of departure in the study of group behavior.[8] It should be noted, however, that although they had no single hypothesis to prove, they did have a carefully outlined objective.

Hypotheses and working theories must be used with caution. They may guide, but they must not dominate the study; otherwise you are likely to find yourself tipping the scales in favor of your thesis. You must learn to hold your theories lightly, to admit alternatives and to treasure exceptions. A classic example of the illegitimate use of hypotheses is afforded by Herbert Spencer who evolved social "laws" from his inner consciousness and then set research assistants to find concrete examples of the truth of his assertions.[9] They were able to find large numbers of illustrations supporting his positions but since the evidence on the other side of the argument was not examined critically the so-called proof is virtually worthless. By Spencer's method one can "prove" almost anything.

Remember that in most social situations you can easily find what you are looking for. Indeed, the very

[8] Lynd, Robert S. and Helen Merrell, *Middletown* (New York; Harcourt, Brace & Company, 1929), p. 3.

[9] Goldenweiser, Alexander A., *Early Civilization* (New York; Alfred A. Knopf, 1922), pp. 21-22.

form in which you conceive your problem may predetermine the results of a study. This danger has led Mr. and Mrs. Sidney Webb to the conviction that an inquirer should not merely seek answers to specific queries. Rather, questions should be considered only as suggestions for investigating a whole social institution or situation. Patiently seek all available facts concerning the segment of experience being studied. Only after you have done this can you hope to answer specific questions. Often you will find in retrospect that initial inquiries deal with unimportant or irrelevant situations.[10] This danger does not do away with the need for clear-cut purposes, but it reinforces the view that hypotheses and questions must be flexible, tentative instruments rather than rigid dogmas.

Problems of Method

No field of knowledge lies outside the legitimate scope of social inquiry but in the present rudimentary state of the social sciences there are many issues that cannot as yet be handled adequately by existing research techniques. Thus the plan of an investigation must be formulated with a full appreciation of the possibilities and limitations of the methods available for carrying it forward.

There are, of course, many aspects of the social fabric that can be studied in strictly objective measurable terms. You can count the number of people living in a given area, plot their distribution, ascertain their rate of growth or record their standards of living, and if the

[10] Webb, Sidney and Beatrice, *Methods of Social Study* (New York; Longmans, Green & Company, 1932), Chap. II.

work is done well the results should be objective, i.e., repeatable. Because of the large number of elements in our social life that can be handled in this objective way, it may be argued that such social measurements should be one's aim when undertaking dispassionate studies of society. Certainly it is socially valuable for a competent organization like the National Bureau of Economic Research to ascertain accurately the wealth and income of the people of the United States.[11]

But most measurable studies do not deal directly with human aims and aspirations. In the language of Professor John Dewey:

> "Of course, one cannot think, understand and plan without a basis of fact, and since facts do not lie around in plain view, they have to be discovered. But for the most part, the data which now are so carefully sought and so elaborately scheduled are not social facts at all. For their connection with any system of human purposes and consequences, their bearing as means and as results upon human action, are left out of the picture. At best they are mere physical and external facts. They are unlike the facts of physical science because the latter are found by methods which make their interrelations and their laws apparent, while the facts of social 'fact-finding' remain a miscellaneous pile of meaningless items. Since their connections with human wants and their effects on human values are neg-

[11] National Bureau of Economic Research, *Income in the United States* (New York; Harcourt, Brace & Company, 1921-22), Vols. I and II.

lected, there is nothing which binds them together into an intelligible whole."[12]

This may be an extreme statement but it cuts to the heart of the problem which most agitates social investigators: how can you deal objectively with social aims, ideas and beliefs? There are, according to the prevailing views, at least three things to do: (1) you can ignore them; or (2) measure them indirectly; or (3) deal with them in vague qualitative terms.

Handling Ideas

Those who, like Dr. John B. Watson and the extreme behaviorist school, ignore the realm of ideas claim that psychological factors in society do not really count. They subscribe to the adage that actions speak louder than words and consequently they maintain that it is not what a person says he thinks, or even what he thinks he thinks, that really matters—the crucial element is what does he actually do.[13]

The second viewpoint, which is allied to the first, is that many subjective, intangible factors can be measured indirectly. This position was succinctly expressed by Professor Edward L. Thorndike when he said nearly twenty years ago that ideals may be as lofty and as subtle as you please, but if they are real ideals, they strive for achievement, and if anything real is achieved, it can be measured.[14]

[12] Dewey, John, "Social Science and Social Control," *The New Republic,* Vol. LXVII, No. 869, July 29, 1931, p. 276.

[13] Watson, John B., *Behaviorism* (New York; W. W. Norton, 1925).

[14] Thorndike, Edward L., "Address" (*Proceedings Indiana University Conference on Educational Measurement,* April, 1914), Bloomington, Indiana, University Bookstore, 1914.

The third position is quite at variance with the other two. How can you precisely weigh and measure so subtle and intangible a thing as a man's attitude toward God? Really to understand what men do you must study directly the psychological aims and purposes that alone give meaning to their acts. Thus the late Charles H. Cooley once said that the attempts of social investigators to dodge and to circumvent the mental and emotional processes of society are "pseudo-science" and will not succeed. Social investigators "must advance through them, not around them."[15] When asked how these subjective factors can be treated objectively the advocates of this position point out that presumably students of society are themselves human beings and can therefore understand at least the simpler psychological states of those they are trying to study.

Speaking broadly, differences in belief regarding the best methods of dealing with the psychological factors in society have divided social investigators into two great schools—the qualitative and the quantitative. The latter emphasizes the need for objectivity and measurability while the former maintains that the really important elements in society are the intangible psychological ones.

Theoretically, there is no reason why the same investigator should not undertake both types of inquiry, especially as the two approaches supplement each other. Usually this does not occur because the two methods involve different types of individuals with different training and background. The statistically minded

[15] Cooley, Charles H., *Life and the Student* (New York; Alfred A. Knopf, 1927), p. 154.

worker who wants measurability and precision is not likely to be satisfied with what he terms impressionistic statements. On the other hand, the non-statistically minded inquirer is inclined to feel that mere numeric studies remain dry dead bones until they have been clothed with the flesh and blood of the loves, hates and ambitions that are, according to him, the things that really make the wheels go round in society.

Increasing Measurability

It is not our purpose to take sides in this debate. Social investigation is too young and too untried to rule out any reasonable method of studying human problems. Moreover, the kind of topic selected for study often settles the issue automatically. You could scarcely investigate adequately the subtleties of race prejudice and antagonism merely by counting.

It seems pertinent to point out, however, that developments in most branches of research have been accompanied by an increasing use of precise and objective techniques. Take, for example, business fluctuations. A hundred years ago, studies of the ups and downs of business were confined to journalistic accounts of the excesses accompanying the boom and the misery caused by deflation. Gradually, observation has become more precise until today we are beginning to know in measurable terms many of the symptoms of deflation and recovery. Anyone who can devise a yardstick for measuring in quantitative terms significant qualitative items will have made a valuable contribution to social research.

The studies of Doctors Edgar Sydenstricker and Will-

ford I. King[16] afford concrete illustrations of the importance and value of developing precise social measuring rods. The problem before these investigators was to weigh the relative economic status of families. For this purpose it is obviously inaccurate to employ the mere number of people composing each family since a household of five adults involves very different expenditures than one composed of a father, mother and three young children. Formerly, it had been customary to assign statistical weightings to the different individuals in each family group depending upon their age and sex. Thus the Bureau of Labor Statistics arbitrarily considered an adult female as equivalent to nine-tenths of an adult male; a child under three years of age as fifteen-one-hundredths of an adult male; etc.

Such weightings, however, were quite unscientific and Doctors Sydenstricker and King devised a scale which took into account the actual cost involved in maintenance of males and females at each age period. The problem was complicated because certain items such as rent and light are expended by all members of the family collectively, but the investigators succeeded in overcoming this difficulty and set up a uniform scale.

The lack of established techniques has not proved a deterrent to many ambitious investigators. More and more topics left heretofore to speculation are being dealt with by developing research techniques. If the problems of an inquiry are clearly seen, inventive genius often has found a means of solving them.

[16] Sydenstricker, Edgar, and King, Willford, I., "The Measurements of the Relative Economic Status of Families," *Quarterly Publication of the American Statistical Association,* new series Vol. XVII, No. 135, September, 1931, pp. 842-857.

One of America's chief contributions to the study of society has been its emphasis upon the necessity of gathering realistic, quantitative data and, despite limitations, this approach has much to commend it. The weaknesses of philosophic and impressionistic data-gathering are too obvious to require elaboration.

The hope that social research may become increasingly measurable and quantitative does not mean that in general social inquiries can approach the exactness of physics and chemistry. Between the social and the natural sciences there is a great gulf fixed. The intangible psychological factors that must be taken into account when studying society limit the possibility that, as a rule, social inquiries can be as precise as those in astronomy or even in biology. As a matter of fact, certain scholars are convinced that many American investigators are over-stressing the need for precision. Why go to the trouble of carefully measuring items that may not be worth measuring? Do not assume that you can deal adequately with your problem merely by gathering statistics about it. Before you adopt a specific ideal of exactness, you should inquire whether the concept is suited to the particular field that you want to study.[17]

Delimiting the Project

Intimately connected with the question of method is the problem of deciding upon the scope of a research project. It is not enough to know that you want to undertake a study of such a subject as race segregation or character education. You must go much farther and

[17] Mannheim, Karl, Review of *Methods in Social Sciences, American Journal of Sociology,* Vol. XXXVIII, No. 2, September, 1932, pp. 273-282.

decide the exact nature of the inquiry you intend to make. Research implies restricted studies of delimited topics. You will want to determine early the exact lines that you must follow to meet the main purpose of your study.

A good illustration of the need for delimiting the scope of a project is found in *Business Cycles and Unemployment*.[18] Following the first post-war depression the National Bureau of Economic Research was asked by the Conference on Unemployment to make a study of direct practical methods of handling unemployment problems. The aim of the inquiry was to deal with immediate rather than with the long-time factors. It was soon found that the investigators had to segregate seasonal from cyclical fluctuations, and confine their attention to the latter, even though it was recognized that this delimitation had distinct disadvantages. As the director of the study, Professor Wesley C. Mitchell, pointed out:

> "Anyone who works even a little way into the problem of seasonal unemployment realizes that it breaks down under analysis into as many problems as there are seasonal trades, and that to treat any of these problems intelligently it is necessary to master a host of details concerning the materials and production, the technical processes and personnel, the commercial organization and the markets of the trade in question. Obviously, the agencies that are to deal with these problems must have qualifications of a special sort. We have had

[18] National Bureau of Economic Research, *Business Cycles and Unemployment* (New York; McGraw-Hill Book Company, 1924).

to choose between two evils in deciding whether to treat both cyclical and seasonal unemployment or to treat one problem in artificial separation from the other. The evil of separation is decidedly less than the other evil would have been."[19]

Illustrative Example

The way in which you delimit a project will depend not alone upon the purpose of the study but upon your viewpoint and insight. In a study of Mexican immigration you might plan to inquire into the number of Mexican immigrants who enter this country each year paying due attention to the problem of smuggling and illegal entry. You might then plot the distribution of the Mexicans living here and study the nature of the jobs at which they work. Further you might compare the size of the Mexican family with that of the native-born Americans and contrast the natural rate of growth of the two groups. Such an approach would result in a statistical study and could be made largely on the basis of existing records.

Another investigator, however, might feel that the really important elements in the problem of Mexican immigrants were psychological. What motives induce Mexicans to leave their homeland and come to the United States? What difficulties confront them on the way? How are they received by the communities in which they settle? Such questions can only be answered by interviews and observations in the field. This attack on the problem would require intimate and uninhibited conversations with considerable numbers of Mexicans

[19] *Ibid.*, pp. 1-3.

and their neighbors and would probably result not in a statistical study but in a study of cases.

Generally it is desirable to combine different approaches when attacking your research problem. In the study of almost any social problem you will probably have to take up two major considerations. One of them is the distribution of the thing you are investigating. What is the magnitude of the problem of Mexican immigration? This in turn leads to the question of how many Mexicans there are and how they are distributed. But the minute you sort things into classes you arrive at abstractions. In the real world, people and situations exist not in abstract classes but in combinations. Therefore, you will also want to study cases in their actual social setting.

In a social inquiry the study of cases should not be confused with case work. The latter refers to the sort of thing the public health nurse or social worker does when she tries to "improve" a particular neighborhood or visits a client.[20] The sociological investigator, however, may not be interested in such practical day-to-day social rehabilitation, but in studying specific cases to understand the basic problems involved and to obtain a well-rounded view.

At the outset it may not be possible without considerable preliminary study to decide finally upon the definite lines of research to be followed. Darwin tells us that having settled upon his main objective—the study of the problem of biological variation—he proceeded without any theory to collect quantities of facts. But he soon perceived that natural selection was the

[20] Giddings, *op. cit.*, pp. 91-104.

keystone of man's success in developing useful species of animals and plants. Here is a concrete example of how a great investigator actually developed the scope of a monumental piece of research.[21]

Estimating the Time and Costs

After the general purpose and scope of your study has been worked out, it is possible to arrive at an estimate of the time and cost for the project. In reality, the question of costs will have come up for consideration from the start. Obviously, there is no use planning an expensive study unless there are prospects of getting the resources to carry it through. If you are under the necessity of conducting investigations alone without supplementary funds, common sense will dictate that you limit yourself to an inexpensive study.

Whether an inquiry be large or small, its costs in time and money should be carefully considered in advance. Of course, there are instances when ignorance has led a worker to push to completion a larger study than he might otherwise have undertaken. Dr. Paul H. Douglas has confessed that if he had foreseen that to complete his work on real wages would require the major portion of his energies for six years and that for most of that time he would have to devote the larger part of his income to it, he might never have had the courage to undertake the task.[22]

As a rule, there is a great advantage in appreciating beforehand the amount of work involved in a study. The tendency is decidedly to underestimate the time

[21] Pearson, *op. cit.*, p. 33.

[22] Douglas, Paul H., *Real Wages in the United States* (Boston; Houghton Mifflin Company, 1930), Preface, p. viii.

and money required. This is particularly true when, as is often the case, figures are merely "guessed at." Several devices can help to avoid this difficulty. Costs should be ascertained by estimating individually the expense of the different specific phases of the inquiry, such as expense of traveling and field work, cost of questionnaires and statistical work, etc. The best way to proceed is to record and itemize each step in the contemplated study and to determine its probable time and cost separately. The sum of these items is likely to be a far more accurate budget estimate than any blanket guess for the study as a whole.

The expense of the different steps should be computed liberally with the full realization that in all probability there will be delays and "waste motion" arising from such unavoidable factors as sickness and errors in judgment. The Institute of Social and Religious Research has found it desirable for every budget to contain a reserve fund amounting to at least five per cent of the total.

When computing costs some of the main items to be considered in both large and small studies are: (1) renting and equipping an office including desks, chairs, telephones, typewriters, adding machines, filing cabinets, etc.; (2) salaries of workers and expense of holding meetings and conferences; (3) cost of supplies such as correspondence paper, stamps, tabulation forms, printing of schedules and questionnaires, purchase of maps, books, magazines, etc.; (4) traveling expenses; (5) special costs such as having tabulations made by a commercial agency, making of graphs and charts, paying advisers, hiring an editor, etc.; (6) costs of writing

COOPERATIVE RESEARCH PROJECTS				
Year	Project	Cooperating Agency	Annual Amount	Total
1927-28	Local communities of Chicago	Chicago Historical Society	$1,500.00	
1928-29		Chicago Historical Society	500.00	
1928-29		Chicago Council of Social Agencies	250.00	
		Otto L. Schmidt	100.00	
		E. L. Glasser	150.00	
				$ 2,500.00
1926-27	Jewish Scholarship Children of Chicago	Scholarship Association for Jewish Children		425.00
1926-27	Publication of Carter Henry Harrison I	C. O. Johnson		500.00
1927-28	Registration of Social Statistics	Association of Community Chests and Councils	7,036.95	
1928-29		Association of Community Chests and Councils	9,468.31	
				16,505.26
1927-28	Registration of Social Statistics	Chicago Council of Social Agencies	1,044.67	
1928-29			1,705.98	
				2,750.65
1927-28	Census of Market Research Agencies for the Chicago Region	International Advertising Association		750.00
1927-28	Vital Statistics for Heart Disease in Chicago	Chicago Heart Association		500.00
1927-28	Archaeological Survey of Illinois	Frank Logan	250.00	
1928-29		Frank Logan	500.00	
				750.00
1927-28	Living Problems of Young People in the Rooming House District	Mrs. Douglas Smith		1,200.00
1927-28	The Negro in Chicago	Chicago Urban League	101.66	
1928-29		Chicago Urban League	2,752.59	
				2,854.25
1927-28	Legal Status of Women in Illinois	National League of Women Voters		2,000.00
1927-28	Meat Packing Industry	Institute of Meat Packing		12,000.00
1928-29	Placement of Negro Children	Julius Rosenwald		5,000.00
1928-29	The Negro in Business	Julius Rosenwald		750.00
1928-29	Study of Basic Causes of Organized Crime	American Institute of Criminal Law and Criminology		2,695.40
1928-29	Police Department Survey	Julius Rosenwald		2,500.00
1928-29	Publications of the History of Illinois State Federation of Labor	Illinois State Federation of Labor		1,200.00

Exhibit 1. Costs of a Number of Projects Undertaken at the University of Chicago

(Data from *Chicago: An Experiment in Social Science Research,* by T. V. Smith and Leonard D. White.)

and printing the report; (7) expense of making results of the study known to the public including magazine and newspaper publicity, holding of conferences, etc.

There is always the danger that the funds of a study will be exhausted before the investigation is finished. This is virtually what happened in connection with the 1925 New York State Census of Population, and many similar examples could be cited.

There is no panacea that will automatically solve this problem but there is a device that can help. The money for a study should be so divided that funds originally intended for use in the later stages of a project cannot be used to meet unforeseen costs in the earlier stages. To this end it is important at the outset not only to budget separately the costs of the analysis and the write-up stages, but to keep these funds distinct from those for data gathering. This simple expedient will go a long way toward preventing the unfortunate situation that arises when all the money has been spent in collecting information and there are no funds available to analyze and present the materials after they have been gathered.

When working out a budget for a project there is usually a pronounced tendency to underestimate the time needed for the different phases, particularly that required in analyzing the data and writing up the materials. People inexperienced in social research often imagine that after the basic materials have been gathered—the documents assembled, the questionnaires returned, the interviews recorded—the facts can be digested and made available for publication in a very short time. This, however, is seldom the case. Often it takes longer to put the materials of a study together

and to see their relevance and meaning than to collect the information in the first place. Since the most reliable and valuable facts can be invalidated by hasty and careless handling during the analysis and write-up stages, it is important in any study that sufficient time and money be set aside for this phase of the work.

The long period of time that sometimes elapses between the start of a study and its completion is illustrated by the Russell Sage Foundation's investigation into *Employes' Representation in the Coal Mines*.[23] The time schedule of that inquiry was as follows:

Nov. 1919 to April 1920	First investigator's field work
April 1920 to Nov. 1920	Analysis of data and preparation of the first report.
Nov. 1920 to Feb. 1921	Manuscript in hands of representatives of the company and of mine workers.
Feb. 1921 to March 1921	Personal conferences in Colorado with company officials; further field work by second investigator.
March 1921 to Sept. 1922	Data completely re-analyzed and new manuscript prepared by both investigators.

[23] Van Kleeck, Mary, "Procedure followed in Studying the Industrial Representation Plan of the Colorado Fuel and Iron Company," *Journal of Personnel Research,* Vol. IV, Nos. 4-5, 1925, p. 147.

Sept. 1922 to April 1923	Manuscript edited and printed.
May 1923 to Dec. 1923	Galley proofs sent to company officials and memorandum of criticism prepared by them.
Dec. 1923 to April 1924	Manuscript revised in light of company's criticism. Copy of manuscript sent to United Mine Workers. Mr. John D. Rockefeller, Jr., accepted invitation to write introduction.
April 1924 to Jan. 1925	Book held for publication with others in same series.

This schedule, which covered more than five years, illustrates a few of the many delays that may arise in connection with a research project.

Formulating a Summary Statement

After every major aspect of the study has been considered, it is, as a rule, advantageous to prepare in writing a statement giving the salient facts about the proposed investigation. This summary should include: the main objectives of the study, the timeliness of the investigation, its relation to other works in the same field, the nature of the basic data to be collected and the qualifications of the personnel available to undertake the work. Special attention should be paid to methodological problems, especially to the way in which the facts of the study will be analyzed after they have

been collected. The summary should also include statements about the cooperation and assistance to be obtained from interested agencies or individuals; detailed costs of the project; an estimated time schedule; the method of financing the study; and finally, plans for publishing and disseminating the information collected.

Chapter II

CONSULTING AVAILABLE SOURCES

VERY early in an investigation it is important to become thoroughly familiar with the work of others on the same subject. Such preliminary study is necessary not merely to avoid the possibility of spending time and money collecting information that is already in existence, but also because acquaintance with available materials is an essential prerequisite to carrying forward intelligently new lines of inquiry. To add to knowledge, you must already possess a large part of the knowledge in your field.

Few investigators will at the start have an adequate grasp of the available bodies of information. Hence exploration of sources should almost invariably be undertaken at the outset of a project. The Institute of Social and Religious Research has frequently spent weeks studying sources and canvassing various possibilities before drawing up even the preliminary outline of a project. In a few cases this exploration has itself been so extensive as to become a separate study.

It is often assumed that consulting available sources is solely a matter of library research, but experience shows that invaluable research materials, such as the records of countless social agencies, are not listed in any library, while the suggestions and "leads" that can

be obtained from competent advisers are frequently of far more worth than weeks of library research.

Consulting with Advisers

During the progress of a study, especially during the planning stages, qualified advisers can often add new insight into sources, problems and methods. The investigator will naturally talk over his research problems with friends, but, in addition, he should deliberately seek the impersonal opinions of outside experts. The persons interviewed should include those intimately acquainted in a practical way with the field to be covered as well as those experienced in the technical problems of social research.

Advisers can be organized into formal committees, but it is often more advantageous to consult with them on an individual basis. The usual committee works better on paper than in fact. In theory, an advisory group is supposed to be the balance wheel of a project. In reality, the committee may be composed of busy people with special interests of their own who necessarily meet in haste and pass resolutions without a full knowledge of all the facts. Furthermore, a resolution adopted by a group of specialists is likely to be a compromise measure which does not represent in full the attitude of any member of the group.

Of course, there are occasions when formal committees are highly desirable. If an investigator wants to gain status and a friendly reception for his study there is scarcely a better way to proceed than by using a committee whose personnel carries weight with the people with whom the investigator must deal. For instance, in

a study made by the Institute of Social and Religious Research of Negro problems in cities,[1] the director of the inquiry secured the support and backing of the Commission on Interracial Cooperation and of certain local organizations because these groups enjoyed the confidence of the people from whom he wanted to secure facts. Thus he was able to gain access to materials that otherwise might not have been made available.

An interesting use of advisers for helping to secure impartiality has been developed by the National Bureau of Economic Research. Its board of directors is composed of individuals with very diverse backgrounds and points of view—one is a member of the American Federation of Labor; another a representative of the American Bankers Association; a third is a college professor, and so on. Each piece of research, both at its inception and after it has been completed, is submitted to the members of this heterogeneous group for their comments and criticisms. No report is published without the approval of at least a majority of the entire board, and from time to time dissenting opinions of individual members are printed as footnotes to the reports themselves.

Before planning conferences with advisers it is well to remember that even though an expert can quickly tell you not only where to look for source materials but how to evaluate them and use them, he can hardly be expected to give serious attention to badly prepared inquiries which indicate on their very face that you do not know what you are talking about. Thus, before

[1] Woofter, T. J., Jr., *Negro Problems in Cities* (New York; Doubleday, Doran & Company, Inc., 1928).

consulting advisers, be sure to gain a thorough knowledge of your subject by spending considerable time in a library analyzing the literature and creating a bibliography.

Library Research

It is not the purpose of this discussion to tell in detail how to find your way about a library, especially as the whole subject is treated at length by the authorities listed in the annotated bibliography appended to this book. If you have not had actual experience in library research consult these sources since you can easily waste many days in a library in aimless search. There are, however, certain suggestions regarding library research that may be singled out because of their special value in social investigation.

A research worker examining source materials should not only seek the main bodies of information bearing on his problem but should, in addition, look for studies in allied fields that have developed methods of analysis applicable to his problem. Thus, a person interested in making a survey of agricultural colleges might well find Dr. Abraham Flexner's study of medical education[2] of value in suggesting ways and means of attacking his own problem.

When looking into the methods of study employed by others it is well to remember that most published statements of methodology are highly idealized versions of what actually occurred. Fundamental difficulties

[2] Flexner, Abraham, *Medical Education in the United States and Canada* (New York; Carnegie Foundation for the Advancement of Teaching, 1910).

may be passed over entirely or mentioned only when the worker has successfully overcome them. Social investigators, like other human beings, hate to admit failure, weakness or lack of good judgment although, fortunately, there are exceptions. The bibliography at the end of this book includes the statements of several workers who have been unusually self-critical in recording the difficulties connected with their studies. Such confessions merit careful study.

An important aspect of library research is the creation of a bibliography. Early in a study you should start to compile a list of books, pamphlets and reports bearing upon your subject. The mere survey of titles, publication dates and tables of contents is a necessary preliminary to every research voyage of discovery.[3]

Before beginning your library research decide upon a systematic method of keeping notes. This whole subject is excellently treated in Mrs. Beatrice Webb's *My Apprenticeship*,[4] which points out that it is not enough merely to record data accurately—note-keeping should involve the critical faculty as well.

Criticism

Throughout the period of library research—as well as at every other stage of a study—there is constant need for both constructive and destructive criticism. It is almost incredible to what an extent even educated people accept without question the statement of the

[3] *A London Bibliography of the Social Sciences* (London; The London School of Economics and Political Science, 1931), Vol. I, Introduction by Sidney Webb, p. v.

[4] Webb, Beatrice, *My Apprenticeship* (New York; Longmans, Green & Company, 1926).

printed page. Until a few years ago the myth that the people of Western Europe had expected the end of the world in the year 1000 was accepted as an historical fact although there seems to be no evidence in the local chronicles of the time to show that people believed it. Or, to take another example, the theory is put forward and widely published that the villages of America are rapidly declining, and within an amazingly short space of time the proposition is accepted as a self-evident truth. But is it? How convincing is the evidence? Here the mere process of questioning may lead to an interesting bit of research. You must constantly be on guard against false Hoseas and Jeremiahs.

The critical student will note that one important source of confusion in the literature of the social sciences arises from the fact that the same term may be used in half a dozen senses. Many basic concepts are employed with entirely different meanings not only from one author to another but even by the same writer. Not long ago one investigator in a single report used the same term in seven different senses. The word "rural" is officially defined in non-comparable ways from country to country and such concepts as value, family, foreign, progress and trend have a host of varying meanings.

The historians have done a great deal to develop ways and means of critically studying and evaluating documentary evidence. Probably in no other branch of scholarship has so much attention been given to purely methodological problems. A good many of these techniques will be found applicable to social investigation. Persons interested in this aspect of research are

urged to consult such a standard treatise as the *Introduction to the Study of History* by Professors Charles V. Langlois and Charles Seignobos[5] or the more recent work of Professor Allen Johnson, *The Historian and Historical Evidence*,[6] which discusses in detail the apparatus of critical scholarship, including the delicate psychological problems of evaluating the competence and the biases of an author.

In general, the historian when analyzing his sources employs much the same techniques as the lawyer. In scrutinizing testimony he aims to find out whether witnesses are telling the truth and tries to discover their biases—conscious or unconscious. He tests the ability of individuals to make accurate observations and to arrive at sound judgments. He also determines whether the observers knew intimately about the subject under discussion and whether they wrote out their reports at the time or at a later period. In addition, he must ascertain whether witnesses can express themselves accurately in words. These critical procedures can be used effectively by the social investigator.[7]

Tapping Unpublished Sources

Documents existing in libraries are only a fraction of the sources the worker must seek when dealing with many subjects. Often public and private agencies con-

[5] Langlois, Charles V., and Seignobos, Charles, *Introduction to the Study of History*, tr. by G. G. Berry (London; Duckworth & Co., 1925 ed.).

[6] Johnson, Allen, *The Historian and Historical Evidence* (New York; Charles Scribner's Sons, 1926).

[7] Schlesinger, Arthur M., "History; Mistress and Handmaid," *Essays on Research in the Social Sciences* (Washington; The Brookings Institution, 1931), pp. 150-151.

tain valuable bodies of social information not on record in any library. Social investigators labor under certain decided handicaps as compared with natural scientists but they enjoy the great advantage of having vast bodies of significant data regularly collected for them by governmental and private agencies. A whole army or workers are continually assembling data about human beings. An excellent example is the information gathered by the Federal *Census of Population*. Each enumeration secures a multitude of sub-totals that are never published. In most cases these unprinted materials are too particularized to be of interest to the general public but for research workers they are of the utmost value, especially if the figures available for small groups or areas can be supplemented by actual field investigations.

Detailed Census data can be used in many important ways. If a health clinic wants to know the number of babies in a given area, if a local Y.M.C.A. needs facts about the number and distribution of the boy population of a certain section, if a housing commission wants data on the extent of overcrowding in the homes of this or that community, let it first obtain what information is available in the files of the Government before resorting to the much more expensive process of gathering data by direct field studies. Moreover, since Census materials are regularly collected every ten years, they can be used to show not only present-day conditions but changes over the decades.

The tabulated but unpublished information in the files of the Census Bureau can be secured quite easily. The Census Bureau will furnish any but confidential figures for the mere cost involved in copying them from

the original "run sheets," and in those cases in which the desired facts have not been tabulated, they can be obtained by paying the actual tabulating costs. Some years ago the Institute of Social and Religious Research, in connection with a study of the rural immigrant, wanted to know the racial background of the alien farmers living in Bayfield and Douglas Counties, Wisconsin. The 1920 published Census volumes presented by counties the country of birth of the foreign-born farmers, but did not show the birthplace of the parents of native-born farmers whose mothers and fathers were born abroad. The Census Bureau, however, furnished a special hand count of the required information in less than a week's time and at a cost of only $10.[8]

The Census Bureau is but one of many government agencies that collect far more data than they publish. Various other federal departments such as the Bureau of Labor Statistics, the Office of the Commissioner of Immigration and the Bureau of Ethnology are also mines of untapped information. In addition, the state governments, as well as an army of private organizations, gather vastly more data than they actually print. Many advertising concerns and business associations are continually assembling facts of social value. Then too, there are the records of such agencies as the Charity Organization Societies, Marital Clinics, Institutes for Child Guidance, etc., all of which are accustomed to keep detailed accounts of the cases coming under their care. No exhaustive survey of these research materials

[8] Brunner, Edmund deS., *Immigrant Farmers and Their Children* (New York; Doubleday, Doran & Company, Inc., 1929).

has ever been undertaken but they are known to be unusually rich and varied.

Some years ago Professor Niles Carpenter made a reconnaissance of the research resources of the Buffalo area and found a wealth of material both published and unpublished. The largest bodies of unprinted materials were case records dealing with poverty, crime, child guidance, and mental disorders. In this particular city the files of the Charity Organization Society, the Bureau of Public Welfare, the Catholic Charities, the Jewish Federation for Social Service, the Erie County Probation Department, the Children's Aid Society, the Buffalo Children's Court, and the Buffalo State Hospital for the Insane contained thousands of case records useful for social research.[9]

Of course, you may have difficulty gaining access to certain of these data since case-working agencies usually take the position that their relation to their clients is as confidential as that of a doctor to his patients. The question therefore arises whether these organizations in fairness to their clients can permit their records—invaluable as they are for scientific inquiry—to be utilized for research purposes. Frequently, however, a way can be found through disguising names and places for making the information available to the reputable investigator.

Despite vast bodies of potentially valuable data, social research workers have not yet learned to make the

[9] Carpenter, Niles, "The Research Resources of a Typical American City as exemplified by the City of Buffalo," Papers and Proceedings of the American Sociological Society, Vol. XX, reprinted in *American Journal of Sociology*, Vol. XXXII, No. 1, part 2, July, 1926, pp. 222-225.

maximum use of the great reservoirs of published source materials and have hardly begun to tap the unpublished records. A questionnaire sent to social investigators regarding their source materials showed that little use has been made of the wealth of information issuing in a steady stream from different branches of the federal government, and that even less use has been made of the statistical materials collected by the various states.[10]

Letters, Diaries, etc.

When canvassing possible sources of existing research materials do not overlook information in the form of letters, diaries and the like. Doctors William I. Thomas and Florian Znaniecki made extensive use of the letters of immigrants in their study—*The Polish Peasant in Europe and America*.[11] Indeed, the first part of that work consists almost exclusively of the presentation and analysis of 764 letters. In connection with this same work it is interesting to note an ingenious device employed by these two investigators—the offering of a prize to immigrants who would supply intimate detailed facts about themselves. But a word of caution is necessary when employing such records. As the anthropologist, Dr. Paul Radin, has so cogently remarked:

> ". . . letters and autobiographies written by citizens of such complicated civilizations as are those

[10] Rice, Stuart A., and Brinton, Hugh Penn, "The Problem of Sociological Source Materials," reprinted from *Publications of the American Sociological Society*, Vol. XXVI, No. 3, August, 1932.

[11] Thomas, William I., and Znaniecki, Florian, *The Polish Peasant in Europe and America* (New York; Alfred A. Knopf, 2 vols., 1927).

of our own time, in their turn, represent most frequently conscious or at best unconscious, distortions of the people who wrote them. Our notions of convention and propriety effectually bar any true revelation. No man who regards his thoughts, feelings and actions of sufficient importance for him to note them down in a diary or an autobiography, ever admits to himself or to the world for whom he is writing that his life has not been a unified whole or that it did not gradually lead to a proper and early heralded climax. Can anyone picture to himself a man, in our civilization, writing an autobiography in which he frankly admitted that his life had ended in an anti-climax or that he had throughout been but a reed driven the way the wind listeth? And yet many of us, be it confessed, are so driven, even some of those who write autobiographies."[12]

Studies Based upon Available Records

Many valuable sociological studies have been made solely from already recorded data. Glance for a moment at an historical study of a sociological nature such as the *Economic and Social History of an English Village*.[13] Professor Gras here presents the story of an English village from earliest times until the present day, aiming to give a detailed, intimate picture of agricultural

[12] *Crashing Thunder:* The Autobiography of an American Indian, edited by Paul Radin (New York; D. Appleton-Century Company, 1926), p. xvi.

[13] Gras, N. S. B., *Economic and Social History of an English Village* (Crawley, Hampshire) A. D. 909-1928 (Cambridge, Mass.; Harvard University Press, 1930).

methods in a single village. The study is made almost entirely from existing records, although a visit was paid to the village to gain a present-day view. The book consists of 160 pages of exposition and introduction and some 400 pages of documents, maps, statistics, tables and the like, which reproduce in part or in whole the varied sources. Thus for the earlier periods the author uses such sources as the village charter and the record of Crawley in the *Domesday Book* compiled for King William in 1080, while for later periods he was able to obtain more complete records—court files, election returns, land fines, surrender for the purpose of a mortgage, village censuses, excerpts from the parish register from 1646 to 1927, accounts of farmers and collectors, etc.

The employment of existing records as a basis for significant social studies calls for qualification. Many records so laboriously collected have but the slightest worth. Thus legal investigators have weighed certain of our court records and found them wanting. In like manner medical investigators have discovered hopeless confusion in hospital records.

Numerous studies based upon existing sources have been hampered by defects in the type of information available. Thus Professor Hugh N. Fuller's study—*Criminal Justice in Virginia*[14]—which surveyed for the years 1917, 1922 and 1927 the operation of criminal courts in twenty-six counties and eight cities of the state, was limited seriously by the nature of the court

[14] Fuller, Hugh N., *Criminal Justice in Virginia* (New York; D. Appleton-Century Company for the Institute for Research in the Social Sciences, University of Virginia, 1931).

records available, the number of items being too small for adequate statistical handling. Fortunately the author recognized the difficulty and in his inferences did not exceed the limits of his information.

Professor Moritz Liepmann in his study—*Krieg und Kriminalität in Deutschland*[15]—reveals the same difficulty. In this inquiry he attempted to show the relation between the War's tremendous upheaval and the prevalence of crime in Germany. During the World War many valuable facts were gathered about crime but interpretation was difficult, as Professor Liepmann points out, because the records did not distinguish between major crimes and minor offenses. Even more important was the absence of data about the backgrounds of the criminals. This fact alone seriously limited the sociological usefulness of these materials.

In spite of inherent limitations, nevertheless, many bodies of existing social data can be used to excellent purpose by an investigator even though the information at hand is not ideal. The investigations into the distribution of wealth in the United States illustrate the point. In 1896 Dr. Charles B. Spahr first published *An Essay on the Present Distribution of Wealth in the United States.*[16] In 1912 Dr. Frank H. Streightoff put out his careful analysis—*The Distribution of Incomes in the United States.*[17] This was followed in 1915 by

[15] Liepmann, Moritz, *Krieg und Kriminalität in Deutschland.* Wirtschafts und Sozialgeschichte des Welt-Krieges, Deutsche Serie (Stuttgart; Deutsche Verlags-Anstalt, 1930).

[16] Spahr, Charles B., *An Essay on the Present Distribution of Wealth in the United States* (New York; T. Y. Crowell & Co., 1896).

[17] Streightoff, Frank H., *The Distribution of Incomes in the United States* (New York; Columbia University Studies, No. 2, 1912).

Dr. Willford I. King's *The Wealth and Income of the People of the United States.*[18]

These three volumes constitute important additions to our social knowledge and illustrate the type of contributions that individuals can make when working alone. These investigators, however, had of necessity to make their original estimates from fragmentary material gathered by different persons at different times and for different purposes. In some cases, the original counts, usually by government officials, were doubtless faulty, but only when the errors were quite evident could they attempt to go behind the returns and criticize the validity of government reports.[19]

The importance of making an exhaustive analysis of our wealth and its distribution led the National Bureau of Economic Research to take up the problem as its first study. This development is significant, indicating that there are many research projects which are too large for the resources of any lone investigator. The Bureau divided the study into two distinct parts. Dr. Oswald W. Knauth dealt with the distribution of wealth by using the records of the Federal Income Tax authorities, while Dr. King attacked the same problem through other sources, particularly Census returns. Although employing such different sets of information the findings of the two investigators agreed very closely.[20]

The widespread interest in the results of the study led the directors of the National Bureau under the

[18] King, Willford I., *The Wealth and Income of the People of the United States* (New York; The Macmillan Company, 1915).

[19] *Ibid.*, p. viii.

[20] National Bureau of Economic Research, *Income in the United States* (New York; Harcourt, Brace & Company, 1921-22), Vols. I and II.

direction of Dr. King to continue the investigation and expand its scope. The mere task, however, of revising the original estimates and bringing the figures up to date has employed since 1922 most of the time of two to six research assistants and computers. Such facts testify to the necessity for the individual worker rigorously to delimit his research project.

In conclusion we cannot do better than reiterate that consulting and evaluating available sources is an essential step in virtually every voyage after new truth. Do not assume hastily that you know all the existing bodies of information bearing on your topic and that you appreciate their potentialities and limitations. Time and thought devoted to critical study of sources is effort well spent.

Chapter III

DIRECT OBSERVATION

After canvassing secondary sources, you may find that to deal with your problem you need to gather new bodies of information at first hand. In such cases there are only a limited number of ways to proceed. You can personally observe the subject of study, or interview people qualified to throw light on your problem. You can ask individuals to fill out questionnaires and schedules bearing on the topic, or devise tests and experiments for creating pertinent data.

Of course, these methods of field investigation are not separate and distinct, but overlap one another at many points. Tests are often devised in questionnaire form and direct observation frequently merges into the interview. With a full realization of the close interrelationship that exists among the various ways of primary fact-gathering, the discussion will take up each of them separately in order to illustrate certain major difficulties inherent in gathering trustworthy social data and to point out some of the devices that have been evolved for improving the process of collection.

Direct observation is an important way of gathering data on any subject, but it is of special value in the social sciences because many human situations cannot be studied under artificial conditions. Men often act

stiltedly and self-consciously when they realize they are being watched. Hence you will want to scrutinize with care the usual activities of the people or institution you are investigating.

Participant Observer

An important consideration to be kept in mind when observing human beings is that the actual basis of a man's behavior may only be revealed when his interests are at stake. Hypothetical or conventional activities frequently have little significance. Thus Professor Edward A. Ross believes that the actions of people under danger, in defeat, or after a stroke of luck are particularly valuable social data,[1] for at these times the usual inhibitions or rationalizations are absent.

Certain types of observation can best be carried on by means of what Professor Eduard C. Lindeman calls the "participant observer"—an investigator who takes part in the activities of the group being studied.[2] LePlay employed this method long ago in his famous study of budgets. He got important bodies of information by living as a member of working class families, and many other investigators have used a similar approach.

Professor Nels Anderson started to collect materials about the hobo largely through first-hand observations. He had long been familiar with casual laborers, having shared their experiences "on the road" and in the lodging house areas of many large cities. He started his more

[1] Ross, Edward A., "Getting at Significant Social Situations in Foreign Countries," Chapter VIII of *World Drift* (New York; The Century Company, 1928).

[2] Lindeman, Eduard C., *Social Discovery* (New York; New Republic, Inc., 1924), p. 191 and Chapter VIII.

Exhibit 2. HOBO LIFE
These photographs speak for themselves.

formal studies by living for about a year in "Hobohemia" where he himself acted the part of a hobo and gathered intimate life histories by spending ostensibly idle evenings in the park listening to down-and-outs tell the story of their lives. Professor Anderson also made visits to the various "jungle" gambling houses and became the inmate of lodging houses where he got personally acquainted with the biological species *pediculosis vestimenti* and *phthirius inguinalis,* as well as the human denizens of "flop houses." He even spent two weeks in jail, which is a good deal of participating for anyone, but his final report clearly reflects the insight gained by much intimate observation.[3]

The importance of the method of direct observation has been recently emphasized because of the vogue of the behaviorist school of psychology which, under the generalship of Dr. John B. Watson, has virtually banned the method of interrogation as a means of uncovering data. According to the behaviorists, there is no use asking a person what he is doing as his answer will be inaccurate both because he cannot correctly analyze his own motives and also because when answering a question he will make the reply in terms of you and not in terms of the thing he is really doing.[4]

Without accepting the behaviorist position, it must be admitted that one good way to find out about human beings is to watch them. Observation, if intelligently employed, need not yield results that are inferior to the methods of the laboratory.

[3] Anderson, Nels, *The Hobo* (Chicago; University of Chicago Press, 1923).

[4] Lindeman, *op. cit.,* p. 182.

The problem of observing anything and especially our fellow men is not so simple as might at first appear. We often imagine that good eyes and our innate intelligence provide us with sufficient powers of observation but we must learn to distrust ourselves. Sherlock Holmes was continually reminding his friend Watson that he could see but not observe, and this generalization applies to most of us.

Unreliability of Observation

Many examples might be given of the unreliability of casual observations but two illustrations must suffice. Years ago a deliberately prearranged disturbance by three students took place in a class of seventy-five pupils of logic at the University of Wisconsin. While the professor was collecting papers, two students started a scuffle and almost immediately a third threw two silver dollars in the air and then scrambled to recover them. The professor asked the three boys to leave the room and then, before there could be any interchange of opinion, requested each of the remaining members of the class to write as fair and complete a statement as possible of what had happened. Since the University of Wisconsin is operated on the self-government basis the pupils naturally assumed that their testimony might be used as evidence in the student court and therefore had special motives for being accurate.

Certain questions were agreed upon as the basis for each report. It is significant that the class was divided virtually into three equal groups on such an objective matter as the physical position of the teacher at the time the incident occurred. In answer to the question,

"Where was the instructor when the disturbance began?" twenty-two said he was near the front of the room, twenty-one said he was in the rear, while twenty claimed he was about in the middle. Moreover, five widely scattered individuals reported—and according to later interviews would have testified under oath—that when the disturbance began the professor was in the very act of picking up his or her particular paper.[5]

One of the major obstacles to accurate observation is that human beings are subject to a "mind set" which may introduce constant errors of the most serious type. Professor Robert S. Woodworth reports a concrete example of this common failing. About thirty members of a class were virtually unanimous that in a class-room experiment a Mr. B "butted in" and spoiled it, when in reality Mr. B was not even a contributing cause. The details were as follows:

Dr. Woodworth had conspired with two students, from a college class of thirty young men, to enact a prearranged scene before the group. He interrupted his lecture at a particular point to say that Mr. A—one of his fellow conspirators—had prepared a memory experiment for the class to try. Mr. A at once came forward and, after placing a low screen upon the desk and arranging several objects behind it, said "We shall need to light the desk light." Both Dr. Woodworth and Mr. A turned on the electric switches but no light came. The two men stood registering perplexity when Mr. B—the other conspirator, who was sitting in the front row

[5] Otto, M. C., "Testimony and Human Nature," *Journal of the American Institute of Criminal Law and Criminology*, Vol. IX, 1918, pp. 98-104.

—started up, extended his arm over the screen, and screwed in a bulb, producing light. As Mr. B again took his seat, Professor Woodworth from behind gave the screen a push and it fell on the floor, revealing the objects behind it. Mr. A registered annoyance and Dr. Woodworth, after remarking that he could not continue with the experiment, hastily removed the objects from the top of the desk and resumed his lecture.

Two days later when each student wrote his own account of what he thought had happened it was found that virtually everyone was unanimous in agreeing that Mr. B had ruined the experiment by knocking over the screen. One witness even went to the length of explaining that Mr. B's senior gown became entangled with the screen although, as a matter of fact, Mr. B was wearing no gown at the time.[6]

Requirements for Accurate Observation

Even simple observation requires a certain critical background of knowledge and experience. Count Herman Keyserling reports that on his tour around the world, he spent some time in the jungles of Ceylon, but was able to make observations of only the most coarse and obvious kind. He was struck with the profusion of tropical birds and rare butterflies, the varieties of exotic plants and animals. But they left little other than pleasant sensory images. In the new and strange tropical setting he lacked the background of detailed scientific knowledge that would enrich his sensory experience with "meaning" and understanding. To all in-

[6] Woodworth, Robert S., "Psychological Experience with the Interview," *Journal of Personnel Research,* Vol. IV, Nos. 4-5, 1925, pp. 162-165.

tents and purposes he was "blind."[7] Hence one of the chief requisites in any study is to become thoroughly conversant with the whole topic under investigation. Even experts in a particular field are notoriously inept when they enter other fields.

A common but erroneous dogma is that lack of knowledge eliminates prejudice. It is falsely assumed that unfamiliarity with a field will result in "freshness and originality" of approach or viewpoint. Actually, the so-called unprejudiced observer from Mars or Mr. Wells's fiction would probably be more bewildered than penetrating in his observations. Often, as anthropologists have found with dismay, the traveler who knows least about a country or a primitive race brings home the most biased account of it. Yet, even in present-day social studies, people sometimes confuse lack of prejudice with lack of knowledge.

A good illustration of such distortion occurred in a study of factory conditions recently undertaken by an investigator who boasted that he knew nothing about the industry. The theory was that ignorance would aid him in being "unbiased" but instead the author's attention was attracted to many meaningless details, to the spectacular, the novel and the unimportant. Ignorance of a subject must not be confused with a lack of bias. As Pope said, "A little learning is a dangerous thing."

To a surprising extent a person sees only the thing he is looking for. This is a point that has been brought out vividly by Bertrand Russell:

[7] Keyserling, Count Herman, *The Travel Diary of a Philosopher* (New York; Harcourt, Brace & Company, 1925), Vol. I, p. 73 and pp. 39-87.

> "The manner in which animals learn has been much studied in recent years, with a great deal of patient observation and experimentation. . . . One may say broadly that all the animals that have been carefully observed have behaved so as to confirm the philosophy in which the observer believed before his observations began. Nay, more, they have all displayed the national characteristics of the observer. Animals studied by Americans rush about frantically, with an incredible display of hustle and pep, and at last achieve the desired result by chance. Animals observed by Germans sit still and think, and at last evolve the solution out of their inner consciousness. To the plain man, such as the present writer, this situation is discouraging. I observe, however, that the type of problem which a man naturally sets to an animal depends upon his own philosophy, and that this probably accounts for the differences in the results."[8]

If it is hard for a trained observer to watch dispassionately the actions of rats, how much more involved is the problem of dealing with the activities of man. As a matter of fact, it is scarcely conceivable that an observer can be completely objective when viewing the culture in which his life is imbedded. Even the observations of Dr. John B. Watson himself—the arch-behaviorist—have recently been subject to serious question. As a result of studies of babies, he came to the conclusion that at birth only three pattern responses

[8] Russell, Bertrand A. W., *Philosophy* (New York; W. W. Norton, 1927), pp. 29-30.

were present—fear, love and rage. The researches of Dr. Mandel Sherman, however, have offered a serious challenge to the things Dr. Watson thought he found. A number of different observers were asked to identify the reactions of babies observed in the flesh and also as recorded in moving pictures. In some cases the audience was allowed to see the stimuli; in others only the reactions were shown; while sometimes both stimuli and reactions were exhibited. The result of the whole series of tests was a complete lack of agreement among the observers as to what emotion the response indicated unless they were shown both the stimuli and the responses. In other words, the observers could not accurately identify a reaction unless they already knew what produced it. As Dr. and Mrs. Gardner Murphy have pointed out, this only proves how well the observers had learned their "Watson."[9]

Probably the best present-day example of the difficulty of unbiased observation is offered in the varying accounts that come from Russia. Even the reports of the Tsarist régime are highly confused. One man conceives old Russia in terms of the colorful court life and the extravagance of the nobility; a second views it in terms of secret police, Siberian prisons and the Fortress of St. Peter and St. Paul; a third recalls the paternalism of the landowners and the liberation of the serfs. With the coming of communism the accounts become even more contradictory. A subject that embroils the emotions, political antipathies, social attitudes and preju-

[9] Murphy, Gardner and Lois B., *Experimental Social Psychology* (New York; Harper & Brothers, 1931), pp. 56-57.

dices of people is an excellent testing ground for objectivity. Thus, despite the years that have elapsed since the Bolsheviki assumed control in Russia, it still remains true that nearly all the books describing this régime are fantastic in their praise or blame. Most studies of Russia are completely lacking in their pretended objectivity and are filled with trivialities. No middle-of-the-road position is possible when discussing a régime that is a direct challenge to capitalism, nationalism, democracy, private property and religion. The protagonists of an old order are seldom capable of observing accurately a new régime.[10]

The difficulties just mentioned do not begin to exhaust the possible list of obstacles that confront the investigators who want to study society by means of direct observation. Attitudes and beliefs, emotions and early training tend unconsciously to color all that we see around us. These factors will be dealt with further in later chapters, but enough has been said to show that even direct observation is frequently a difficult and complicated matter.

Developing Powers of Observation

Fortunately, a person's powers of observation can be improved by practice. This is a subject that has not received the attention it deserves but there is no doubt that the capacity to "see" can be consciously improved. One of the great contributions made by Louis Agassiz as a teacher was his ability to develop the powers of

[10] Schuman, Frederick C., Review of Gurian, W., *Der Bolschewismus—Einfuhrung in Geschichte und Lehre* in *American Journal of Sociology*, Vol. XXXVIII, No. 2, September, 1932, p. 308.

observation in his students. Nathaniel S. Shaler tells in his autobiography the method employed.

Agassiz first brought Shaler a small fish with the requirement that he should study it, but should on no account talk to anyone concerning it, nor read anything relating to fishes. To Shaler's inquiry, "What shall I do?" Agassiz said in effect, "Find out what you can without damaging the specimen."

In the course of an hour, Shaler thought that he had completely investigated the specimen. It appeared to him to be a case for a summary report, which he was anxious to make and get on to the next stage of his studies. But Agassiz, though always within call, concerned himself no further with his student that day, nor the next, nor for a week. At first this neglect disturbed Shaler but he soon saw that it was a game, so he set his wits to work and in the course of a hundred hours felt that he had done as much work as possible.

He became interested in finding out how the scales went in series, their shape, the form and placement of the teeth, etc. Eventually he was so full of his subject that his bearing expressed his attitude, and so on the seventh day Shaler disgorged his learning while Agassiz sat on the edge of his table puffing a cigar.

At the end of an hour's telling, however, Agassiz swung off with the terse remark, "That is not right." Shaler therefore went at the task anew and in another week of ten hours a day had results which astonished himself and satisfied Agassiz. Still there was no trace of praise in the master's manner. He merely gave Shaler about half a peck of bones, telling him to see what he could make of them. Over two months were devoted to

this task with no other help than an occasional remark from Agassiz, "That is not right." Finally, the task was done, but Shaler never lost the sense of power that the experience had given him.[11]

Experimental studies confirm the conclusion that the power of observation can be consciously developed through competent direction. This fact was demonstrated by a test performed some years ago at Indiana University. Part of the experiment consisted in comparing the achievements of three different groups of college students who were shown pictures and geometric designs. Group I was given intensive training in the type of observation being tested; Group II was given less training while Group III was the control group with no special training. The students in Group II and more especially in Group I were lectured on the whole psychology of observation, were told of the importance of training in observation and were shown the inaccuracies of their practice tests. They were given specific hints about improved methods for surveying the pictures and remembering what they saw. The result of the whole series of experiments was to show that the highly trained group improved in the ability to observe more rapidly than the less trained group and far more rapidly than the untrained control group.[12]

The question of training in observation is, of course, part of a crucial problem in social investigation—how

[11] *The Autobiography of Nathaniel Southgate Shaler* (Boston; Houghton Mifflin Company, 1909), pp. 98-100.

[12] Beard, A. S., "Educability of Observation and Report" in Studies in Observational Learning under the direction of W. F. Book, Indiana University, 1922, Report of Proceedings, *Bulletin of the Extension Division,* Indiana University, Vol. VII, No. 12, August, 1922.

can one be sure that the results obtained by one observer are similar to those of another. Dr. Dorothy S. Thomas and her co-workers at the Institute of Human Relations at Yale University are now making intensive studies aimed at standardizing and improving observation. Experiments have been performed testing the ability of different observers to record behavior in "talkies," and preliminary studies have compared different methods of recording observations.[13]

Essentials of Observation

Ten requirements for scientific observation formulated by Professor Edwin L. Clarke are here summarized:

1. The possession of reasonably good sense organs.
2. Being in a proper position to see clearly. For instance, the umpire is usually in a better position to observe than the spectator who questions his decision.
3. Mental maturity as contrasted with the uncontrolled imagination of the child.
4. Mental normality including freedom from fatigue and hallucinations.
5. All-round alertness of the kind which made Darwin aware of the implications of Mathus' *Essay on Population.*
6. Capacity for reasonably accurate estimates without the aid of measuring devices. For example, Münsterberg found most people

[13] Thomas, Dorothy S., et al., *Observational Studies of Social Behavior* (New Haven; Yale University Press, 1933).

deficient in their judgment of time. Such defects can be partly eliminated by training.

7. Ability to make fine discriminations. The discovery of the planet Neptune after being overlooked by early astronomers is an illustration of the importance of this principle.
8. Good general knowledge of the particular field in which observation is to take place. Consider the lack of value in many travelers' accounts of "savage" peoples.
9. Knowledge of what one wants to see. Observation requires a clearly defined purpose.
10. Freedom from bias, excitement and prejudicing habits. Many people see only stereotypes—"Bolsheviks," "politicians," "Yellow peril."[14]

The preceding discussion has doubtless made clear some difficulties in actually applying these rules.

Tools of Observation

The accuracy of direct observation can be greatly improved by the use of such devices as diaries, note-books, schedules, photographs and maps.

The diary or note-book is so obvious and elementary a device that it may hardly seem worthy of mention, yet it is a surprisingly valuable tool in many kinds of studies. It is astounding how quickly impressions and observations become blurred. Therefore, it is essential to record them while they are fresh and vivid. Such notes are especially useful during the writing period since

[14] Clarke, Edwin L., *The Art of Straight Thinking* (New York; D. Appleton-Century Company, 1929), Chapter V, pp. 105-123.

Exhibit 3. Immigrant Children
A few pictures can often tell more than pages of description.

intimate and graphic details help to add local color to the final report.

Note-keeping is particularly useful in stamping impressions upon the brain of the investigator; the mere act of recording serves to impress the fact.[15] The task of keeping notes during the course of a social survey is often time-consuming and when the pressure of work becomes heavy the tendency is to let the task go by default. This should be avoided even if it is necessary to reduce the number of observations.

In many types of inquiries you will find it desirable to formalize the process of note-keeping and to draw up lists of points to be covered in every case studied. When investigating any particular unit you can so easily become interested in some unusual aspect that you forget the rest of the points you should look into. The result is that your findings will not be comparable from one case to another.

Schedules not only help you to remember important but unspectacular issues; they also afford convenient devices for jotting down answers to a series of questions, thus relieving the memory of needless strain. Failure to use a schedule may often lead to untrustworthy results. Human beings tend to recall those aspects of a topic that are most striking, unusual or appealing. The schedule gets around such difficulties since it is at once a guide, a memory tickler, a recording device and a means of limiting the scope of your inquiry.

Pictures, maps and charts are other tools that help in the observation and recording of data. The sense of vision is central in all the varied ways in which we

[15] See Chapter VII, *infra*, quotation from Charles Booth.

usually perceive our environment and communicate it to others. Not only our memories but our constructive thinking is largely in terms of visual images.[16] The use of photographs and maps will, of course, depend upon the nature of the investigation, but in most types of community studies they are essential.

Maps are useful in analyzing as well as in gathering information. A device that helps to multiply their value is to plot different series of social information on the same size base map; then by superimposing one map upon another it is possible to observe interrelationships in the data. To facilitate comparison the maps should be drawn on transparent paper and held before a light. In this way it is easy to see, for example, whether cases of illegitimacy and juvenile crime are found in the same areas of a given city.[17]

Valuable discoveries have been made through the use of such maps. The cause of sleeping sickness was revealed in this way. On the basis of information supplied by missionaries and local chiefs, an investigator in Uganda made spot maps locating all the important insects of the region and also a map showing the distribution of the cases of sleeping sickness. By superimposing one map upon the other, it was found that the maps of sleeping sickness and of the tsetse fly coincided.[18]

[16] Riggleman, John R., *Graphic Methods for Presenting Business Statistics* (New York; McGraw-Hill Book Company, 1926). Introduction by Malcolm C. Rorty, pp. xi-xiii.

[17] This method of analyzing social data has been used extensively by the "Chicago School." See especially *The City* by Robert E. Park, Ernest W. Burgess and Roderick D. McKenzie (Chicago; University of Chicago Press, 1925).

[18] Thomas, William I., "The Relation of Research to the Social Process" in *Essays on Research in the Social Sciences* (Washington, D. C.; The Brookings Institution, 1931), pp. 175-176.

Scoring devices are sometimes employed to facilitate comparisons in observation. A number of these devices have been worked out by Dr. J. Harold Williams and the staff of the Whittier State School in California designed to "grade" home and neighborhood conditions.[19]

Such objective scoring devices need not preclude qualitative description, but they help in selecting certain definitely measurable factors and translating them into objectively comparable terms, according to a scale agreed upon in advance. Thus a typical Whittier Scale for Grading Neighborhoods takes up five elements: I. Neatness, Sanitation and Improvements; II. Recreational Facilities; III. Institutions and Establishments; IV. Social Status of Residents; and V. Average Quality of Homes.

Each community is "scored" separately on these points. For instance, the card for "Neatness, Sanitation and Improvements" with a maximum possible score of five, is divided into two sections, the lower third containing detailed instructions for the guidance of the worker, while the upper two-thirds leaves room for the worker's description and "score" of the neighborhood being studied.

Every element on the score card is assigned a numerical value. In the last analysis the validity of these "weights" depends upon the knowledge and insight of the person devising the score card. Usually it is desirable to base the weightings on the combined judgments

[19] Williams, J. Harold, and Clark, W. W., *A Guide to Grading of Neighborhood Conditions* (Whittier State School, Whittier, California; Dept. of Research Bulletin No. 8, 1919).

III. Social values manifested thru disposition to improve environment, use of time, and participation in community activities (500)	
A. Home surroundings and home (235)	
1. Farmstead (45)	
a. General appearance, implying slightly elevated, well-drained location	5
b. Distance of house from road (standard, 4 rods)	5
c. Distance of barns from house (standard, 6 to 8 rods)	5
d. Service yard neatly kept	5
e. Lawn neatly kept, both front and back	5
f. Shade trees present (maximum 5 to 15, well placed)	5
g. Shrubs present	5
(1) Softening corners 2.5	
(2) Screening foundation 2.5	
h. Vegetable garden and small fruits present	5
2. House (125)	
a. Ample porch space, front and back	5
b. Exterior appearance (painted)	4
c. Cellar (well-drained)	12
Entrance indoors from kitchen	2
d. Windows and doors screened	12
e. Separate room for laundry	2
f. Kitchen sink, drained	6
g. Pumps inside (well and cistern)	6
h. Water system:	
(1) Running cold	10
(2) Running hot	5
i. Bathroom	10
j. Indoor toilet	10
k. Septic tank	10
l. Heating system (hot air, steam, or hot water)	12
m. Lights (electric or gas)	12
n. Floors (hardwood or finished)	4
o. Number of rooms to each individual (maximum 3)	2
p. Guest room	1
3. Equipment (65)	
a. Oil or gas for cooking in summer	6
b. Laundry sent out	5
c. Washer (power)	3
d. Iron (gas or electric)	3
e. Cleaners (sweeper vacuum, vacuum)	2
f. Bread mixer	1
g. Fireless cooker or pressure cooker	2
h. Number of easy-chairs (maximum points for 1 to each person)	4
i. Couch or duofold	1
j. Library table	1
k. Bookcase or book shelves	1
l. Pictures on walls (maximum points for 4 to 6 oil paintings or enlarged prints or standard sketches)	6
m. Books in library (maximum points for 100, 4 of which are read annually)	4
n. Magazines and newspapers taken (maximum points for 1 daily paper, 1 local paper, 2 general magazines, and 2 farm papers)	8
o. Musical instrument (maximum points for both piano and phonograph)	4
p. Telephone	6
q. Automobile	8

Exhibit 4. Part of a Rating Scale used by Dr. E. L. Kirkpatrick in his study of "The Standard of Life in a Typical Section of Diversified Farming," Cornell University Agricultural Experiment Station, Bulletin 423, July, 1923. The scale, based on a total of 1,000 points, attempts to score objectively the various factors that enter into "standard of living."

of several experts rather than upon your own individual judgment. At best, such scoring devices are arbitrary.

In this connection an important question that naturally arises is how to make sure that two different investigators will use the same methods of scoring. To insure uniformity the Whittier Scale employs a chart, furnished to each worker, which describes in detail a great variety of typical conditions and indicates the proper score value for each. Thus, if you are in doubt about the value of any particular set of conditions, you turn to the chart and look for the score of the sample case most nearly akin to the one being studied.

Other scoring procedures may be consulted in Professor F. Stuart Chapin's *Field Work and Social Research*[20] but the present brief discussion has, it is hoped, made it clear that direct observation is not a simple and automatic process but requires personal insight, a keen critical faculty and accurate record-keeping.

[20] Chapin, F. Stuart, *Field Work and Social Research* (New York; D. Appleton-Century Company, 1920).

Chapter IV

THE INTERVIEW

Another basic method of collecting data is through the personal interview which is nothing more or less than conversation with a purpose. It is hard to imagine a social study that, to some extent at least, does not make use of the interview. How can human relationships be investigated in any other way? On the one hand, the interview is of value in obtaining the kind of personal factual data secured by the Federal Census; at the other extreme it is useful in getting at intimate feelings and attitudes about such socially important topics as war, religion, politics and the stock market. Thus the interview is needed in securing data for almost all kinds of research studies.

Psychological Problems in Interviewing

Far-reaching problems are involved in interviewing; to use the method successfully you must appreciate these difficulties. Interviewing is a subtle art that should not be used mechanically. Men do not like to admit even to themselves that their activities are irrational or illogical and therefore they invent rationalizations for them. Hence, a social investigator is always in danger of getting people's explanations, or "good" reasons, rather

than their "real" reasons for actions.[1] In this connection it is interesting that Mr. Lincoln Steffens characterized his good friend Theodore Roosevelt as a man who knew a lot and had what he knew always handy, but who often gave reasons instead of actual motives for his conduct. In other words, Roosevelt, according to Mr. Steffens, did not really know why he did what he did.[2]

One of the most common sources of error in the interview lies in the tendency of people to idealize their experiences. A case in point was brought out in a study of forty widows who were asked about their sex life during marriage. Their replies were then studied in the light of the information received from a comparable group of women who were married and living with their husbands. It was found that the death of the husband had cast an aura over the marital relationship. Certainly the widows reported in retrospect distinctly different conditions than were reported by the comparable group of married women.[3]

Unreliability of Testimony

Tendencies to idealize and to rationalize as well as haphazard tricks of memory must be considered in evaluating testimony. Research that depends upon interviewing is often suspect. Thus, a basic criticism raised against Professor James M. Williams' investigation of a

[1] Pareto, Vilfredo, *Traité de Sociologie Générale* (Paris; Libraire Payot et Cie, 1917), Vols. I and II, especially Vol I, Chapters II and III.

[2] *The Autobiography of Lincoln Steffens* (New York; Harcourt, Brace & Company, 1931), Vol. II, p. 513.

[3] Dickinson, Robert L., and Beam, Lura, *A Thousand Marriages: A Medical Study of Sex Adjustment* (Baltimore; The Williams and Wilkins Company, 1931), Chap. XII, especially pp. 279-287.

small town[4] has to do with his use of casual conversations, legends and stories which form a large part of the source material of his studies of "Blanktown."

He found that many old-timers enjoyed answering questions that stirred in them a flood of recollections. But what is the value of uncorroborated testimony?[5] How reliable is the octogenarian's statement of events that transpired in his boyhood? Dr. Williams maintains that in general old people have better memories than ourselves and, further, that weak testimony was discarded. But are the attitudes expressed in these interviews a picture of Blanktown today, of conditions eighty years ago, or a mixture of both? Obviously, ordinary rules of legal testimony are not applicable to such issues.

To correct the inaccuracies of the interview method it may be necessary to check the statements made by recourse to available records. A more difficult problem, however, arises when you must interpret what is said. Many times false answers serve to reveal important truths. This, indeed, is the basic procedure of the psycho-analytical school: testimony is not taken at its face value but is used as a key to unlock the reality behind it. The same procedure is being employed in sociological inquiries. For example, Dr. Willard Waller makes extensive use of this technique in his study of divorce,

[4] Williams, James M., *An American Town* (New York; Columbia University, Kempster Co., 1906); *Our Rural Heritage* (New York; Alfred A. Knopf, 1925); *The Expansion of Rural Life* (New York; Alfred A. Knopf, 1926).

[5] Cf. Analysis by Rice in *Methods in Social Sciences*, Stuart A. Rice, ed. (Chicago; The University of Chicago Press, 1931), pp. 458-467.

Mrs. P--- Resources 10s O.A.P., 6s pension through son killed in the war. Rent 9s.

Mrs. P--- lives in a very nice house, part of which she lets off. Mrs. P--- keeps her part of the house spotlessly clean and the kitchen was very well furnished and very well kept.

Mrs. P--- was very nicely dressed, and unlike many old people her clothes were hardly worn; she said that she had clothes enough to last her at least three years. Her small adopted daughter, aged 4, was also very well looked after and beautifully clean. Mrs. P--- said that they did not eat very much and that Sunday's joint was all the meat that they ate in the week; she said that she was not a great believer in meat and thought that good milk puddings were very much better. She also said that she would rather do without meat altogether than have frozen-meat as it would not have the nourishment that the English meat had.

She seemed very cheerful and wonderfully young for her age. She is one of the pensioners that has paid in for her pension and is very pleased about that. They dislike having things from anyone that she has not earned and I think that she would not have taken it unless she had paid in for it.

Mrs. P--- finds plenty to do; she keeps house for her daughter and looks after her adopted daughter and the house. After she has done all her housework and her odd jobs she does mending and reads the paper.

Mrs. P--- is very proud of the fact that she has brought up eight children and that none of them has gone on to the State for help at any time, as they were taught to stick to their jobs; they have all been in their firms for many years. She said that she had started work at the age of 11; she started work in the scullery for 2s a week and she has worked hard ever since.

She has only recently given up a post that she has had for 13 years; they cut her wages and so she left it but the post is open to her if she wants to go back. She still does odd jobs, as taking in washing or minding other people's children, and earns a shilling or two this way.

She would never ask the Public Assistance Committee for help; she thinks that there are too many people getting help from them without her. She said that she had been brought up never to ask for help.

Mrs. P--- is on the best of terms with her children; she has never asked any of them for help, nor has she tried to keep any of them at home to keep her. She says that she often sees her children and they like coming to see her. The daughter with whom she lives is leaving home to go into domestic service; she has always wanted to do that but she has not liked to leave her mother. Mrs. P--- has at last persuaded her to think of herself and to go and do what she wants.

Exhibit 5. Record of an interview made by an investigator for the New Survey of London Life and Labour, conducted by the London School of Economics and Political Science (Vol. III, p. 437). This type of record supplements the house card previously filled in during a house-to-house canvass of the East End of London. (O.A.P. indicates Old Age Pension.)

The Old Love and the New,[6] in which he constantly interprets the meaning of the testimony collected.[7]

Many topics require this interpretative process. Usually you must go beyond the official documents or the prudent statements of officials but this in turn leads to the danger that our results will reflect personal prejudice rather than the objective facts themselves. This difficulty is one of the most basic that confronts social research. If, however, you display not only your interpretations but the original testimony itself, the reader can conclude for himself whether your judgments are correct.

Deception and Misunderstanding

Misinformation may arise not only from unconscious distortions of the witness, but also from conscious evasion. For example, 600 Negro pastors were asked in a series of individual interviews to state any academic degrees that they had obtained from colleges or seminaries and to mention the names of the institutions. By communicating with the registrars of the schools themselves it was possible to verify the information given by the ministers. When this was done it was found that the number of clergymen with A.B. degrees fell from 155 to 118 and those with B.D. degrees from 100 to 79.[8]

Individuals sometimes answer questions dishonestly or evasively because the desired information is confi-

[6] Waller, Willard, *The Old Love and the New* (New York; Horace Liveright, Inc., 1930), pp. 314-333.

[7] Similarly the Judge Baker Foundation case studies of delinquent boys not only record the statements of delinquents but also interpret them.

[8] Mays, Benjamin E., and Nicholson, Joseph W., *The Negro's Church* (New York; Institute of Social and Religious Research, 1933), pp. 42-43.

dential or merely "none of your business." *The New Yorker* recently recounted the story of a tiny girl who assured a psychological investigator that she was a boy. Everyone, including the mother and the investigator, was distressed at this surprising reply but on the way home the girl confided to her mother that "it's all right to give dumb replies to dumb questions."[9]

At the time of the last Federal Census a woman barricaded herself in her apartment and refused to see the enumerator until her opposition was broken down by the threat of legal action. Not infrequently this attitude of antagonism arises from the fact that the persons interviewed are convinced that the information requested will be detrimental to their self-interest. A man may refuse to give accurate figures about his income because he feels that such data might be embarrassing should they fall into the hands of income tax officials. Similarly, Professor William Z. Ripley reports that corporations often fail to furnish complete financial data even when nominally required by the government to do so.[10]

But assuming the people interviewed really know their own minds and are willing to express themselves unreservedly, they still may not furnish the desired information for the simple reason that they misunderstand what is wanted.

An illustration of the confusion that may arise over the simplest questions was brought out in connection with a study of the textile workers on strike in New Bedford in 1928. Twenty-two questions were agreed

[9] *The New Yorker* (New York; January 14, 1933), p. 13.

[10] Ripley, William Z., *Main Street and Wall Street* (Boston; Little, Brown & Company, 1927).

upon as the basis of the study and eight investigators interviewed 511 strikers. The tenth question on the list read, "Are you in favor of arbitration?" On the face of it one could hardly imagine that such a comparatively simple inquiry could be misinterpreted but as a matter of fact it was. It was discovered later that because of the propaganda of certain labor leaders many strikers associated the word "arbitration" with the terms "resignation" and "surrender." As a result 85 per cent of the workers said they were opposed to arbitration, 11 per cent claimed they were in favor of it, while 4 per cent did not vote. Obviously such returns are likely to be seriously misinterpreted until one appreciates the meaning attached to the word "arbitration" by most workers.[11]

Competence of Witness

When gathering data by the interview method, the investigator is always confronted with the problem of the competence of the witness. Is the person being interviewed qualified to talk on the subject in hand? This question becomes doubly pertinent because of the tendency of many witnesses to express themselves freely on subjects about which they are not qualified to speak. This is one reason for carefully identifying and getting the background of each witness. Irresponsible answers may be useful as a basis for analyzing public opinion but the danger is that they will be given undue importance on their own account. Let a leader in industry talk about problems of eugenics and he may get a far

[11] Bingham, Walter Van Dyke, and Moore, Bruce Victor, *How to Interview* (New York; Harper and Brothers, 1931), Chap. 16, pp. 254-255.

wider hearing than a less well-known person who has devoted his life to a study of the subject.

The problem of getting reliable information by the interview method cannot be resolved merely by limiting the testimony to the opinions of so-called experts, for they too may differ as widely as the poles. Dr. Harry L. Hollingworth reports the case of twelve sales managers who each interviewed the same fifty-seven applicants for appointments to positions involving personal salesmanship. When all the interviews were finished each applicant received a rating from each judge, rank one being considered the most suitable and fifty-seven the least. The results showed that almost any given applicant was likely to receive ratings placing him at any position on the scale. One individual was actually rated first by one judge and last by another.

The variation in the conclusion reached by these judges—chosen for their expert knowledge of salesmen and salesmanship—cannot but cast doubt on certain types of expert opinion. Obviously the usually accepted techniques of interviewing are deficient. With experience you may make the results of interviewing reliable, but in its traditional form the interview is an unconvincing way of gathering facts.[12]

Inaccurate Reporting

The witness is by no means the sole source of error in the interview method. The investigator himself may introduce equally glaring inaccuracies. Assuming that the person being interviewed is willing and able to

[12] Hollingworth, Harry L., *Judging Human Character* (New York; D. Appleton-Century Company, 1922), p. 66.

give the information desired, nevertheless, there is still the problem of recording this testimony accurately. There is always the danger that the person doing the interviewing will unconsciously distort and misrepresent what was actually said.

A number of years ago twelve investigators studied the mental, physical and social characteristics of approximately 2,000 consecutive cases of homeless men who applied for entrance to a municipal lodging house. Later Professor Stuart A. Rice analyzed these records in order to find out to what extent the investigators themselves influenced the results. He discovered that an interviewer who was an ardent prohibitionist attributed the downfall of 62 per cent of the applicants to drink and only 7 per cent to "industrial conditions." On the other hand, a socialistically minded investigator reported only 39 per cent as owing to drink and 22 per cent to "industrial conditions." Moreover, the prohibitionist reported that the percentage of applicants who themselves gave liquor as the chief factor leading to their present plight was 34, while the socialist maintained this figure was only 11. Each interviewer was presumably a competent investigator but the results indicate not only that he interpreted the testimony in conformity with his preconceptions, but that he even let his personal bias influence his report of the actual statements made by the men.[13]

The Natural History of a Delinquent Career is another study which raises the question of the effect of the investigator upon the results reported. It is the story

[13] Rice, Stuart A., "Contagious Bias in the Interview," *American Journal of Sociology*, Vol. XXXV, No. 3, November, 1929, pp. 420-423.

of a delinquent as told by the boy himself. The autobiography first submitted was less than one-tenth as long as the final printed document, the additions being secured by repeated requests from the investigators for amplification at specified points.[14] The question arises, how far have the hypotheses of the investigator determined the type of facts obtained? For instance, the published autobiography gives space to family and neighborhood conditions rather than to social organizations and broader cultural influences. Is this emphasis owing to the interests of the investigators or to the actual facts in the case? Might not another sociologist obtain a different story from the same boy?[15]

Special Types of Interviews

Most interviews involve a face to face conversation between two persons but in certain cases it may be found desirable to interview people in groups rather than individually. A study of theological education got data about clergymen and their jobs by sending to a number of ministerial conferences a trained investigator who asked the pastors present to sit down together and write out the answers to a series of questions.

The group interview method commends itself not alone because it introduces obvious economies of time but also because under certain circumstances it can be made to yield unique values, the clash of opinions acting as a check upon the accuracy of the statements made

[14] Shaw, Clifford R., and Moore, Maurice E., *The Natural History of a Delinquent Career* (Chicago; University of Chicago Press, 1931).

[15] Cf. Sutherland, Edwin H., Review of *The Natural History of a Delinquent Career, American Journal of Sociology,* Vol. XXXVIII, No. 1, July, 1932, pp. 135-136.

by different members of the group. This process of verifying alleged facts is especially useful when you are trying to get at the truth about a conflict situation, such as a strike or a race riot.

A case in point came up in connection with the problem of securing information about certain aspects of the nationalist movement in India. Conferences at which both Indians and Anglo-Saxons were present often led to animated discussions between the two sides regarding the facts of the situation. In general, representatives of the two races were inclined in private conversation to take more radical positions than they expressed in meetings where the other side was represented. Moreover, in group conversations both sides tended to tone down extreme statements regarding the facts in the situation. It goes without saying that if such group conferences are to "work," the different members present must be sufficiently objective to speak without personal animosity or rancor. To use the method successfully requires a good deal of tact.

Another type of interview is the life history variety which is used to get the intimate personal stories of different individuals. Professor Robert E. Park and his co-workers in connection with a study of Race Relations on the Pacific Coast developed a life-history questionnaire to act as a guide in obtaining autobiographical documents from both Orientals and native Americans concerning race relations. One schedule aimed to secure life histories from Oriental and other immigrants on the assumption that such statements are valuable in showing how the "melting pot" works. According to

Dr. Park, the investigator was to seek answers to such questions as: what heritage does the immigrant bring with him from his mother country in the form of hopes, ambitions, equipment, education, technical training, industrial habits, etc.? And how far do the children of the second generation seek to preserve the language, traditions and habits of thought of the older generation?[16]

Dr. Park wanted a concise, vivid personal narrative "with all the inflections and accents of the individual man or woman—and, so far as possible in the first person." He then presented a list of questions "intended to be suggestive merely," covering Early Life, First Impressions of America, Social Contacts, Conflicts and Accommodations, and the Philosophy of Life, the latter aimed at eliciting the Oriental's general impressions concerning his place in American life.

An actual life history document of an elaborate kind is contained in Part III of *The Polish Peasant in Europe and America*, telling in graphic detail the story of a Polish peasant—Wladek—covering more than 300 finely printed large pages. At that, the published story is only half the length of the original document. Wladek was induced to write this autobiography by a promise of money but the investigators believe that ambition and literary interest became almost at once his chief motives.[17] The natural tendency for human beings to dramatize and to rationalize their experiences means

[16] Bogardus, Emory S., *The New Social Research* (Los Angeles; Jesse Ray Miller, 1926), pp. 133-134.

[17] Thomas, William I., and Znaniecki, Florian, *The Polish Peasant in Europe and America* (New York; Alfred A. Knopf, 1927), Part III.

that life history documents must be scrutinized with special care.

Forms for Interviews

Generally it is advisable to standardize the interview record through the use of special forms. These forms are of two kinds. One consists of lists of topics for the guidance of the worker in each interview. Such lists are especially important when you wish to maintain a certain uniformity or comparability of results in interviewing a large number of people. The other type consists of forms for recording the statements made during the interview. Social case workers, for example, have developed detailed forms for reporting interviews with their clients.

Dr. William Healy, in his work with juvenile delinquents, has devised comprehensive and detailed schedules to guide doctors, psychiatrists and social workers in obtaining information from children brought to his clinic.[18] In connection with a study of the foster child a series of questions was prepared to guide the observations and interviews of the investigators. A long list of questions was built up covering the home, relationships to foster parents, the relationships to children of foster parents, the child's life in the home, the child in school, the child and the church, relationships to companions, relationships with own family, older companionships outside the home, relationships with the visitor, and attitude toward the agency. Under these heads were specific questions such as: "Do foster parents act as com-

[18] Healy, William, *The Individual Delinquent* (Boston; Little, Brown & Co., 1915), pp. 53-65.

panions to child?" "Is there a lack of sympathy toward the child?" "Is there open dislike?" etc.[19]

Such lists of questions have two valuable functions—they guide the workers so that even casual conversations with the child or foster parents are turned to a definite purpose; and also they furnish a means of obtaining a body of information which is comparable with the data obtained about other cases. The reports of different investigators are thus made available for detailed comparative study.

The American Association of Hospital Social Workers recently adopted a carefully worked out "Case Record Form" which, after dealing with personal items about the patient such as name, birthplace, race, religion, etc., and obtaining information about relatives and the household, contains the following section covering the medical and social history of the patient.

MEDICAL SOCIAL HISTORY OUTLINE

"(1) *Reasons for Social Study:* State why patient came to attention of social service department. If case was referred, give name of referring person with his title or position.

(2) *Medical Situation:* Under this heading should be included such previous medical data as is significant to the medical social worker, the present diagnosis, recommendations for treatment, and the prognosis. The recommendations for treatment may include the place in which treatment is to be given, length of time, type, diet, medicines, and so on. The prognosis should be interpreted as including the expected outcome both with and without treatment and

[19] Healy, William; Bronner, Augusta F.; Baylor, Edith H. M.; Murphy, Prentice, *Reconstructing Behavior in Youth,* A Study of Problem Children in Foster Families (New York; Alfred A. Knopf, 1929), pp. 259-264.

SURNAME Robinson CROSS REF. DATE OF 1ST APP. 4/5/30 NO. A247

Single (Married) Widow Deserted Divorced Separated

DATE	HOW LONG	ADDRESS	FL.	F. OR R.	RENT PER MO.	RMS.	LANDLORD OR AGENT	ADDRESS	DIST.	DATE
10/20/31	5yrs.	643 Columbus Ave.,	3	R	$28	4	Whitaker Holding Co.	2700 B'way, N.Y.	5	

FOR ADDITIONAL ADDRESSES SEE OTHER SIDE

	FIRST NAME	AGE AT 1ST APP.	DATE OF BIRTH	AT 1ST APPLICATION UNLESS OTHERWISE SPECIFIED: OCCUPATION OR SCHOOL	WEEKLY EARNINGS	READ & WR	AMT. OF INSUR.	WEEKLY PREMIUM	PHYSICAL AND MENTAL DEFECTS	LEFT SCHOOL AT AGE	BEGAN WORK AT AGE
1	MAN'S Gerald	52	Jan. 4 1879	Carpenter	35	✓	none	—	cataracts; hernia, high blood pr.	12	10
2	WOMAN'S MAIDEN E Thal Lynn	50	March 3, 1881	Housewife	—	✓	—	—	stomach ulcers, possible cancer	14	—
	CHILDREN (INCL. MARRIED IF IN FAMILY)										
3	James	15	July 9, 1913	delivery boy	10	✓	—	—	good health,	15	15
4	Joseph	15	Dec. 12, 1916	school	—		—	—	I.Q. 80, adenoids and tonsils.	—	—
5	Vera	13	March 7, 1918	"	—		—	—	normal child.		
6	John	6	Jan. 13, 1925	"	—		—	—	" " , poor sight		
7											
	OTHERS IN FAMILY (FULL NAME)						KINSHIP	TO NO.	BROR. OR LODGR.		
12	Sarah Lynn	83	August 1848	—	—		Mother	2	—		
13											
14											

PAWNS ?

INSTALLMENTS

OTHER DEBTS

OTHER SOURCES OF INCOME (AT 1ST APPLICATION UNLESS OTHERWISE SPECIFIED)

	BIRTHPLACE	NATIONALITY OR RACE	NATIONALITY OF PARENTS	TIME, AT 1ST APPLICATION, IN U. S.	IN STATE	IN CITY	RELIGION	MARRIAGE
M	N.Y. City	Scotch-Irish	—	52	52	52	Roman Catholic	DATE June 1910 PLACE N.Y.C.
W	Ireland	Irish	English and Irish	40	40	40	" "	BY WHOM Father Flynn, St. Malachi's

*MEN.

WHEN	HOW LONG	PREVIOUS ADDRESSES	WHEN	HOW LONG	PREVIOUS ADDRESSES
1910-1926	16 years	158 W. 100th St.,			

RELATIVES NOT LIVING IN FAMILY (WRITE MARRIED CHILDREN FIRST)	ADDRESS	KINSHIP	TO NO.
John Robinson.	45 Crooks Ave, Paterson	brother	1
Mrs. Thomas Higgin Bottom	Liverpool Eng.	sister	1
James Lynn	Belfast, Ireland	brother	2
Margaret Lynn.	Belfast.	sister	2
Michael Lynn	Chicago, Illinois	brother	2
Barry Lynn	Seattle, Wash.	brother	2

REFERENCES	ADDRESS	CONNECTION	OF NO.
Rotoff Construction Co.	400-5th Ave	Employer	1
Carpenters' Union, local #435-220 E 84th St.		union	1

CHURCHES, CHARITIES AND PERSONS INTERESTED	ADDRESS	DATE	IN NO.
St. Margaret's.	99th St. & Amsterdam.		

OF NO.	EMPLOYERS	ADDRESS	FROM	TO	POSITION	DEPARTMENT	FOREMAN	WEEKLY EARNINGS DATE	WEEKLY EARNINGS AMT.
1	Rotoff Contracting Co.	400-5th Ave.	1927-~~28~~	1930	carpenter + laborer	Subway construct.	Jas. Smith.	~~1930~~	$35/
3	Weinbecker's Grocery	320 W. 125th St.	1930	1931	delivery boy	—			$10/

C. O. Dep't of R. S. F.—Case Record Form—No. 22a.

Exhibit 6. CASE RECORD FORM

Prepared by the Russell Sage Foundation to standardize social case records. The record represents the results of a number of interviews.

the extent to which it may be modified by the social conditions.

The source of this information (for instance, the name of the physician and his position) and the date on which it was secured should be clearly stated.

(3) *Social Data:**

(a) Family Background or History

Here may be given information in regard to parents, siblings or spouse, and, in certain instances, to other relatives in such detail as is essential to an understanding of the patient and the present situation. Their cultural background, health, education, religion, employment, earnings, recreation, attitudes toward each other, and so on, may be described. In the case of a child, and in many others, there will probably be the need of subdividing as more detailed information will be required.

(b) Personal History

Information under this heading should cover as many of the following points as are pertinent: the patient's education, work history (as previous and present industry, occupation, work hazards, and so on), marital history, interests, recreation, religion, patient's attitude toward medical-social situation, and so on.

(c) Financial Data

Give a complete statement of the budget including income from wages and other sources, and also details of the expenses and debts.

(d) Housing and Home Conditions

Description of the neighborhood and the house itself,

* The kind and amount of social information should be determined by the medical and social problems of the individual patient, but each of the aspects of the situation as outlined in "a" to "e" should be considered and described. Material should be concisely presented. In all instances, the source of information, the date, and the name of the worker should be stated.

including the number of rooms, sleeping accommodations, routine of living, and so on, should be given.

(e) Reports from Social Agencies

These reports should contain dates on which the social agency opened and closed its case, its reasons for accepting responsibility, its social findings, action taken, and the situation at the time of closing.

(4) *Medical-Social Problems:* The medical-social problems should be stated. The headings 'Findings,' 'Medical-Social Diagnosis,' and 'Medical-Social Classification' may be used for appropriate content.

(5) *Medical-Social Plan:* State the plan of procedure for solving the above problems.

(6) *Medical-Social Treatment:* In summary form or in chronological order with the exact dates should be given the steps taken to solve the problems. Changes in the medical or social situation necessitating changes in the social plan and treatment should be noted under the date the information was obtained.

(7) *Disposition and Evaluation:* The situation should be stated and the definite reason given for the closing at this time. If certain problems have not been solved or no attempt made to do so, reason should be made clear. If possible, estimate what changes that have taken place seem to result from treatment."[20]

This medical-social history outline is presented as a concrete illustration of a good form. Most studies will have to develop their own interview schedules to meet their special purposes, but an investigator when working up interview forms should take the time to study the forms previously worked out by others in the same field. When devising such forms keep in mind the value

[20] "A Medical-Social Case Record Form," *The Family,* May, 1931, pp. 72-73.

of couching your questions, where possible, in the same terms as those used by previous investigators. In this way, your results can be made comparable with those of earlier studies.

Example of Interview Study

Some years ago Miss Mary Van Kleeck, co-author of *Employes' Representation in the Coal Mines*, published an unusually detailed account of the methods of interviewing actually employed in that study.[21] The interview was used primarily to obtain concrete information from officials and workers about the operation of the employes' representation plan. In the course of these conversations many opinions were secured that, though unreliable as facts, were extremely useful in revealing attitudes.

In approaching either officials or workers it was, of course, essential to win their confidence. In certain respects this was more difficult when talking to miners themselves than when meeting their bosses. Whenever possible, workers were met through introductions of their fellows and in any case the approach was independent of the company. Each workman was told the nature of the study and its sponsorship and was assured that he would come to no harm by answering frankly the questions put to him.

As a rule, it was found advantageous to avoid taking notes during the conversation. Instead notes were typed immediately after the interview was over. Each interview was recorded in duplicate on a five by eight inch

[21] Van Kleeck, Mary, "Procedure followed in studying the Industrial Representation Plan of the Colorado Fuel and Iron Company," *Journal of Personnel Research*, Vol. IV, Nos. 4-5, 1925, pp. 133-154.

sheet, the original being sent to the New York office of the Russell Sage Foundation for analysis and filing, while the carbon was kept by the investigator. Every witness was carefully identified and any conclusions or interpretations of the investigator were kept separate from the account of the interview.

Before starting the investigation twelve main topics were agreed upon as central to the study and these topics were kept to the fore in every interview. Naturally, the same dozen questions were not put to each witness since certain individuals knew more about one topic than another. The investigators, as Miss Van Kleeck pointed out, tried to find out those things which the person knew most about through his own experience rather than to follow a precisely uniform scheme of questioning.[22]

In the later stages of the investigation the method of group interviewing was employed but the number of people in each group was kept down to three or four. In these instances greater uniformity in questioning was employed.

One of the crucial problems in this, as in every similar inquiry, is how accurate are the data assembled. In this particular study, reliability was made reasonably sure by carefully selecting the people to be interviewed; by the prompt and complete recording of the interview itself; by checking the data given through other interviews and through documentary sources; by using a second investigator to check the findings of the first; and by submitting the manuscript or galley-proof to those who could correct inaccuracies.

[22] Van Kleeck, *op. cit.*, p. 148.

Within recent years a vast literature has grown up dealing with the interview. The legal profession has done a great deal of work regarding the reliability of testimony. These and other materials have been summarized in a recent volume, *How to Interview*,[23] which discusses the uses, techniques and dependability of the personal interview. In addition, there is appended to that book an elaborate classified and annotated bibliography on the subject. You will probably want to become acquainted with that volume.

Rules of Interviewing

In a very real sense, interviewing is a technique that must be learned by experience. However, as a guide to prospective interviewers who are not already proficient, Professors Bingham and Moore lay down fifty-two elementary and dogmatic suggestions which are here summarized because they suggest the large number of considerations that must be kept in mind when conducting interviews.

These rules fall under three heads. The first deals with general considerations. You are advised to be discriminating in the use of interviewing and to make sure that the problem is significant. It is recommended that the interview be limited to four main purposes: (1) to gain access to objective data; (2) to obtain opportunity for observation; (3) to determine facts which vary with particular persons in particular circumstances; and (4) to ascertain opinions, attitudes or trends in belief. You are cautioned against using the interview for compiling

[23] Bingham and Moore, *op. cit.*

data of uncertain value or for getting general information or common facts.

The next set of rules deals with the problem of preparing for the interview. In addition to such general recommendations as "know your field," you are told to formulate your problem and to prepare in advance a schedule or list of questions. Then secure letters of recommendation and authority, choose your interviews with care, know the person you are interviewing, secure enough interviews and sample the entire group. So far as the mere mechanics of arranging the interview are concerned, make appointments in advance, and provide for privacy. In general you are told to try to take the point of view of the person interviewed and to examine and discount your own prejudices.

Coming finally to the process of interviewing itself the authors lay down the following thirty-two rules:

"1. Gain and deserve the interviewee's confidence.
2. Establish pleasant associations.
3. Render your interviewee a real service.
4. Help the interviewee to feel at ease and ready to talk.
5. Do not ask questions directly until you think the interviewee is ready to give the desired information and give it accurately.
6. Listen.
7. Let the interviewee tell his story; then help him to supplement it.
8. Keep on the subject.
9. Be straightforward and frank rather than shrewd or clever.

10. Avoid the rôle of teacher.
11. Take pains to phrase your questions so that they are easily understood.
12. Avoid implying the answer to your own question.
13. If you offer alternative answers, phrase them so that neither one is acceptable to the interviewee.
14. Help the interviewee to realize his responsibility for the facts.
15. Avoid impertinence.
16. Keep the important questions in mind until adequate information is obtained on each one.
17. Get the full meaning of each statement.
18. Give the interviewee opportunity to qualify his answers.
19. Check answers whenever possible.
20. Interpret the statements at once.
21. Record all data at once, or at the earliest opportunity.
22. Practice separating facts from inference.
23. Check percentages and fractions of quantities by translating them at once into numbers.
24. Be on the alert for constant errors.
25. Do not assume that agreement among interviewee's statements assures their truth.
26. Allow time enough.
27. Do not dawdle.
28. Keep control of the interview.
29. Get all the facts.
30. At the close of the interview, watch for addi-

tional information or new leads in the casual remarks of the interviewee.

31. Secure a confirmatory written summary after an important interview.
32. Check results statistically against reliable criteria."[24]

This discussion has purposely placed emphasis upon the difficulties of interviewing because of the tendency in many social research projects to employ the method uncritically. If properly used the interview can often yield results of great value.

As a rule, it is necessary for an investigator to subject himself—or be subjected to—rigorous training before he can be accepted as a safe and reliable interviewer. Fortunately, it is possible to improve oneself greatly in the knack. With patience, you can go a long way toward recognizing your biases, predilections and preconceived ideas and, what is more difficult, you can learn to divest yourself of them, at least so far as the interview is concerned.

[24] Bingham and Moore, *op. cit.*, Chap. III, pp. 40-55.

Chapter V

QUESTIONNAIRES AND ENUMERATIONS

Schedules and questionnaires have already been mentioned as devices for making observation more thorough and detailed and for guiding the lines of inquiry in an interview. We now want to speak of their more formal uses either as questionnaires mailed out to correspondents, or as printed schedules which an enumerator takes around personally—the sort of thing used in making a population census, for example.

Questionnaires are employed for many purposes—to obtain factual data, to appraise institutions and to measure attitudes. At this point we shall confine the discussion to elementary questionnaires, leaving the problem of creating tests for the next chapter.

Hostility toward Questionnaires

At the outset, you should frankly face the fact that there is a widespread dislike of questionnaires. Professor Manuel C. Elmer calls them the "high-sounding travesty of scientific research,"[1] and a group of American psychologists recently went on record against their use.

The attitude toward a certain kind of questionnaire

[1] Elmer, Manuel C., "Standardizing Social Research Methods," *Social Forces*, Vol. IV, No. 2, December, 1925, p. 302.

can be gleaned from the letter written by Mr. Sinclair Lewis in response to the following: "Dear Mr. Lewis: In the preparation of an article for national publication the following data would be of great assistance to us. Which medium do you generally use in writing? And Why? Pen — Pencil — Fountain Pen — Typewriter. Thanking you for the courtesy of a reply at your very earliest convenience, I am, Sincerely, B—— M——." To this Mr. Lewis replied:

> "My dear Mr. M——, —My very dear Mr. M——:
>
> I cannot tell you how happy your letter—which I judge to have been mimeographed—has made me. All day long I've been wondering if I couldn't find something to write about. Day after day I just sit around hoping that some kind friend or insurance agent will write to me so that I can keep busy. And now you have made me busy. You will never know how busy. First I went out and kicked a cat and then I sat down in the sunshine of my little villa, here at Palm Beach, and thought how glad I was that you had not enclosed a stamped and self-addressed envelope. If you had done that it would have shown a lack of trust in my longing to contribute to that department of Sociology which deals with the mediums—or would you rather I said media?—used in writing, a subject certainly of the first importance.
>
> The fact is I always use a No. 10 brush and red paint. With these I paint my thoughts on the side of a barn.
>
> I use neither pen, pencil, fountain pen nor type-

writer because my wife has pinched my pen, my secretary has pinched my pencil and fountain pen and I have hocked the typewriter.

I am glad that you have thanked me for the courtesy of a reply at my very earliest convenience. Ordinarily I only reply at my earliest convenience. It is only to people like you, my dear Mr. M——, that I reply at my *very* earliest convenience.

My secretary will bill you for the above at the usual rate.

Yours sincerely,

Sinclair Lewis"[2]

Not only do many people dislike filling out questionnaires—as is evidenced by the poor returns to most of them—but they are skeptical about the trustworthiness of data collected in this way. There is no doubt, however, that questionnaires will provide certain reliable information of a precise factual character. Our birth and death statistics are gathered through forms filled out by doctors, although it should be recognized that in such cases there enter the elements of compulsion and legal regulation which are not operative when questionnaires are sent out under private auspices.

Even the United States Bureau of Labor Statistics, which obtains payroll information through questionnaires regularly filled out by manufacturers, found that it required a long campaign of education before it was possible to enlist the cooperation of certain businessmen who regarded this practice as unnecessary govern-

[2] New York Author's League Bulletin, Vol. XIX, No. 6, March-April, 1932, p. 4.

mental meddling. Indeed, so keen was the opposition that the Bureau, although a governmental agency, had to drop certain important lines of statistical inquiry, simply because it was impossible to get people to fill out the necessary questionnaires.

Reliability of Method

Before sending out schedules you will do well to consider carefully the value of questionnaires since they are potentially dangerous as well as useful. The unreliability of certain materials secured in this way is indicated by a test made by Professor Read Bain, who in March gave to fifty college freshmen identically the same questionnaire that he had submitted to them in January. In re-submitting the questions to the same individuals with the same directions he added the further note that a friend had suggested that "there would be a lot of changes" if the test was submitted again.[3]

The students were requested to state with care any changes that had actually occurred during the period between the first and the second tests, such as shifts in residence, changes owing to births and deaths, etc. Few acknowledged modifications of this kind were reported, the great majority seeming to feel that the responses submitted in March were identical with those given in January. However, actual tabulation of the replies showed that out of 3,050 items 709, or nearly a quarter of the total, had been changed.

The questions submitted were of three types—factual

[3] Bain, Read, "Stability in Questionnaire Response," *American Journal of Sociology*, Vol. XXXVII, No. 3, November, 1931, pp. 445-453.

Use carbon to make duplicate. Fill in pages 1 and 4; turn carbon; then fill in pages 2 and 3.
Keep one copy for court files. Send duplicates monthly to Miss Nettie Nulton, State House Annex, Columbus, O.

Petition for Divorce, Alimony, or Annulment

_____ County Statement by Plaintiff

The Plaintiff should exercise great care in filling out this blank. At the hearing, the replies will be attested under oath. The plaintiff will supply information concerning defendant to the best of plaintiff's knowledge and belief.

PLAINTIFF IS NOT TO FILL IN DATA IN THIS BOX

Docket No. of Case_____

Date Filed_____

Date Heard_____

Dft. Atty._____

Date this blank filed out_____

Full Name of Plaintiff — First Name — Middle Name — Last Name

Present Address — No. and Street — City — State — If Farm, Check here

Full Name of Defendant — First Name — Middle Name — Last Name

Present Address — No. and Street — City — State — If Farm, Check here

Name of Plif's Atty.

Address

Has previous application for divorce, alimony, or annulment been made by either party against the other?_____ If so, what year?_____ Where_____

A. Personal Data Concerning Parties

1. Age, Nationality, Citizenship and Residence

	Date of Birth Mo.	Yr.	Place of Birth: City	State or Country	How long resident (last time) in United States: Yrs.	Mos.	Ohio: Yrs.	Mos.	County: Yrs.	Mos.	Citizen of U. S.? Check
Husband			If on nearby farm, check here_____								1. Yes 2. No
Wife			If on nearby farm, check here_____								1. Yes 2. No

2. Educational Level Attained

(Check [with a] in left hand column for husband and in right hand column for wife. One check in each column for the highest level attained should be reflected.)

Husband		Wife
___1.	Never attended school	1.___
___2.	Attended grade school but did not finish	2.___
___3.	Completed grade school	3.___
___4.	Attended high school but did not finish	4.___
___5.	Completed high school	5.___
___6.	Attended college but did not finish	6.___
___7.	Completed college	7.___
___8.	Facts concerning schooling unknown	8.___

3. Literacy

(Check [with a] in left hand column for husband and in right hand column for wife. Use as many checks as necessary)

Husband		Wife
___1.	Able to read and write in English	1.___
___2.	Unable to read and write in English	2.___
___3.	Able to read and write in some language other than English	3.___
___4.	Unable to read and write in some language other than English	4.___
___5.	Able to speak English	5.___
___6.	Unable to speak English	6.___

4. Religious Affiliation

(Check [with a] once in each column)

	Husband	Wife
1. Protestant	___1.	___1.
2. Jewish	___2.	___2.
3. Roman Catholic	___3.	___3.
4. Greek Catholic	___4.	___4.
5. Other	___5.	___5.
6. None	___6.	___6.
7. Unknown	___7.	___7
(Check as to attendance)		
1. Attendance frequent	___1.	___1.
2. Attendance infrequent	___2.	___2.

5. Occupation

(Write in for both husband and wife. Name the trade, profession or particular kind of work, as spinner, salesman, rector, teacher, etc.)

Husband		Wife
.1	Occupation at time of marriage of parties	1.
.2	Present occupation (State in detail)	2.
.3	Name of present employer	3.
.4	Address of present employer	4.
.5	Special occupational training	5.

(Special Occupational Training refers to training in stenography, nursing, auto-mechanics, teaching, etc., etc.)

Exhibit 7. Questionnaire drawn up to standardize records in divorce cases, illustrating an attempt to make greater use of existing court records and to improve future records for research purposes. Data covered includes personal data, data concerning marriage relationship, concerning previous marriage, relatives, and home surroundings. (Prepared by Institute of Law at Johns Hopkins, under Dr. Leon C. Marshall, for study of divorce in courts of Maryland and Ohio.)

family data, factual personal data and subjective personal data. Analysis showed that the students revealed the greatest stability when responding to factual personal data and least when reporting subjective personal data—attitudes and opinions—and further, that the girls were more consistent in their responses than were the boys.

Thus it emerges that attitude questionnaires should be even more carefully devised than those seeking information of a more objective sort. You may assume that most people are able, though sometimes unwilling, to give factual information such as the year of their birth, but attitudes and opinions are quite another matter.

As a common basis of discussion, it may be pointed out that attitudes indicate "the sum total of a man's inclinations and feelings, prejudices or biases, preconceived notions, ideas, fears . . . about any specific topic and that barring deceit the approval of a particular opinion means the possessing of the corresponding attitude."[4]

The unreliability of attitude responses was strikingly brought out when several hundred eighth-grade children in three Chicago public schools filled out the same questionnaire twice, with but a week intervening between the two tests. Only four out of eighty questions were answered both times by all the children in the same manner. When the questions were grouped into types it was found that complete agreement varied from

[4] Thurstone, L. L., and Chave, E. J., *The Measurement of Attitudes* (Chicago; University of Chicago Press, 1929), pp. 6-7.

98 per cent for precise factual items to 78 per cent for attitude responses.

Personal interviews with the children brought to light some of the causes of disagreement and showed how the simplest questions are frequently open to several interpretations. For example, one child, in response to the question whether his father lived at home, replied "yes" at the first test and "no" a week later. Explanation lay in the fact that the child's father was a traveling salesman who happened to be "on the road" when the questionnaires were distributed the second time.[5]

Professor Carle C. Zimmerman reports an interesting experience while making a study of farmers' attitudes concerning cooperative buying and selling, the principles of marketing organizations, and the determination of market prices. Three hundred and forty-five Minnesota farmers were each asked how many years they had belonged to various farm associations, as well as their opinions concerning certain private marketing institutions such as flour mills and meat packing plants. In addition, they were asked what they thought about a number of significant general economic problems.

It was soon discovered that the attitudes expressed fell roughly into two classes: those connected with the farmers' actual overt experiences (e.g., cooperative marketing or retail trade) and those dealing with subjects outside of their actual experience (e.g., tariff legislation). Interestingly enough the attitudes toward their own experiences were so closely correlated with the na-

[5] Cavan, Ruth Shonle, "The Questionnaire in a Sociological Research Project," *The American Journal of Sociology*, Vol. XXXVIII, No. 5, March, 1933, pp. 721-727.

ture of those experiences that the records of overt experiences could be used as a substitute for the verbal attitudes. Professor Zimmerman came to the conclusion that "experience becomes a prediction of the attitude."[6] Thus the research worker may find it desirable to shift the procedure from eliciting attitudes to finding out what have been the conditioning experiences.

Overcoming Defects

Several methods have been devised for overcoming the unreliability of questionnaire responses. One way is to exercise extreme care in the number and wording of the questions. Questionnaires in general, and especially those sent out through the mails, should avoid qualitative questions.

As Professor Robert E. Chaddock has pointed out, the question, "Are you well educated?" does not belong in a questionnaire, but should be worded: "How many years of schooling have you had? Public School? High School? College?" Similarly, housing questionnaires should not contain such vague qualitative terms as "Well-lighted? Airy? Crowded?" but the questions should be cast in such a form as "What kind of lighting system? Gas? Electricity? Kerosene lamps? How many lights per room?" Or "What is the cubic area of the room? How many people per room? etc." Charles Booth in his notable study forty years ago used precise questions of this kind for obtaining quantitative information about housing and poverty in London.

[6] Zimmerman, Carle C., "Types of Farmer Attitudes," *Social Forces*, Vol. V, No. 4, June, 1927, pp. 591-596.

Obviously some types of questions can be answered much more accurately than others and one of the important phases of a questionnaire investigation is to appreciate the limitations of the responses. It is unsafe to assume that even the replies to the Federal Census are all equally reliable. Facts about illiteracy cannot, in the nature of the case, be answered as accurately as queries about age, sex, and nativity.

To overcome bias, the form of questions must be very carefully considered. Questions should not be couched in terms that antagonize or embarrass the person filling them out: inquiries must not be inquisitorial. Often data can best be secured through "slantwise questions."[7] Thus Dr. F. Stuart Chapin cites the instance of 1,000 homeless men being asked: "Are you married?" It was soon discovered that replies to this question were unreliable so the query was re-phrased, "Where is your wife?" and the proportion of men who admitted they were married rose immediately. This flank attack is, of course, commonly employed by doctors and lawyers to break down the guard of a person being questioned.

Another important consideration is the categories employed. Thus, in the South, an investigator studying the relation of diet to disease found that he could not advantageously ask housewives how many pounds of flour they used per week. They simply did not think in those terms, so that the question had to be phrased differently: How often did they buy flour? What was the size of the bag? etc.

[7] Chapin, F. Stuart, *Field Work and Social Research* (New York; D. Appleton-Century Company, 1920), esp. Chapter VII, pp. 172-192.

Name Andrew Bruce. Address 14 Millwood Square.

Borough Barkington.

LONDON SCHOOL OF ECONOMICS, UNIVERSITY OF LONDON. Social Survey of London.

0379 File No. 157

WAGE EARNERS (including unemployed)

Relationship	Age	Occupation	Employer	Place of Work	Cost of Transport Weekly	HOURS Last Week	HOURS Full Time	EARNINGS Last Week s.	EARNINGS Last Week d.	EARNINGS Full Week s.	EARNINGS Full Week d.	State Insurance Deductions s.	State Insurance Deductions d.
Husband	38	Printer	North Press.	Fair Street	2/6	32	50	44	—	55	—	1	4

NON-WAGE EARNERS					
Sex	F	F	M	M	
Age	31	7	6	2	
Relationship	Wife	Daughter	Son	Son	

INCOME FROM OTHER SOURCES							
Sub-letting 2 rooms	4	1½	M	44	55/	8/3	
			WC2	36/1	47/1	4/1	
				32/1	34/1	2	
						5/ 3½	
						2/1	

Date 7/1/30 Interviewer B. Chester.

Exhibit 8. Specimen of Household Investigation Card used by enumerators of the London School of Economics in their study of London Life and Labour. Sample households were chosen throughout London, to each of which an enumerator was sent with the above card.

Questions must be framed as clearly and simply as possible especially since there is no enumerator present to interpret them personally. The research worker will be wise to proceed upon the assumption that given the slightest provocation the recipient of a questionnaire will misinterpret what is wanted. If possible, the questions should be so framed as to call for an answer of "yes," or "no," or a number. Where feasible, it is wise to list the different possible answers and to ask the informant to check the one applicable to his particular situation. This arrangement facilitates the processes of tabulation since such replies are easily classified. It is important to avoid the use of leading questions, such as the classic example: "When did you stop beating your wife?" Often it is necessary to get at important items of information through more than one approach. For instance, a man's age can be checked by asking for his date of birth. On the other hand, it is equally important to keep in mind that lengthy questionnaires may automatically be consigned to the waste basket.

Thus, it becomes clear that many important principles of questionnaire-making are contradictory in their nature. To compile a satisfactory list of questions may require a fine balancing of alternatives plus an intimate knowledge of the type of people being circularized.

Problems of Non-Reporting

One of the vexing problems of the mailed questionnaire is: To whom shall it be sent? Difficulties are often encountered in getting a representative list of persons

who are able and willing to supply the information desired. Generally, only a fraction of the people circularized ever respond at all.

Dr. Daniel Starch has recorded a concrete illustration of the uneven response to mailed questionnaires. Eight hundred schedules were sent to widely differing income groups. On the average, returns were received from 7 per cent of the individuals circularized. It is significant that ninety-three persons out of each hundred did not reply at all. This fact itself would be reason enough for raising the question whether the responses were "representative" even though the original sample of 800 names was known to be entirely typical. Analysis showed that there was a definite tendency for people in the higher income groups to respond better than those in the lower brackets. Only 2.6 per cent of the persons in the classes receiving annually less than $1,000 replied to the questionnaire, compared with 14.1 per cent among those receiving $2,000 to $5,000.[8]

One method of getting around the problem of non-reporting is to stimulate responses by one or more "follow-up" letters. Professor Herbert A. Toops mailed a questionnaire of thirty-seven questions covering three pages to 178 graduates of trade schools, asking about their success or failure after graduation. It took six months to get answers from 93 per cent of the graduates, using six follow-up letters, five of which were sent out after the first, third, fifth, eighth and fifteenth weeks, respectively. The last appeal mailed at the end

[8] Starch, Daniel, "Factors in the Reliability of Samples," *Journal of the American Statistical Association,* Proceedings supplement, Vol. XXVII, new series No. 177-a, March, 1932, pp. 190-201.

of six months was particularly important and consisted of a plea to answer at least a few of the thirty-seven questions, and promised not to bother the informants any further.[9]

It has been found that questionnaires arriving for week-end consideration receive the quickest response. Moreover, the wording of the accompanying letter is an important element.

Dr. Katherine B. Davis employed an interesting device to ensure adequate returns to a mailed questionnaire calling for highly personal information from women. She first wrote a letter to a number of potential informants telling them the purpose of the study and asking whether they would be willing to cooperate. No questionnaires were sent except to women who had agreed in advance that they would fill them out. This arrangement had the advantage of getting the consent of the informant before sending her a long and impertinent-sounding questionnaire.

The clever investigator can often invent ingenious devices for getting people to answer his inquiries.

Further Difficulties

The difficulties of the questionnaire method do not cease with the return of the schedules. It is often a most time-consuming process to tabulate the answers, and moreover, the very categories in which the investigator chooses to tabulate his replies may bias the result.

Obviously, the questionnaire method should be used

[9] Toops, Herbert A., "The Return from Follow-up Letters to Questionnaires," *Journal of Applied Psychology*, Vol. X, 1926, pp. 92-101.

with caution. Often it is a labor-saving device only for those who do not recognize its limitations.[10]

Even when using the questionnaire for taking a "straw ballot" there is the danger that the replies will represent the extremes of opinion in the field because the people who reply are likely to be the rabid adherents of a party—not the middle-of-the-road type of individual.[11]

After so many unkind remarks about the method, it is only fair to point out that certain questionnaire studies have proved sociological successes without any form of legal or governmental assistance. Mr. Claude E. Robinson has weighed in the balance such straw votes as the presidential poll conducted by the *Literary Digest* and the Hearst newspapers and has not found them wanting.[12] These ballots, especially the *Digest* poll, are usually the result of questionnaires submitted about a month before election to a fraction of the population, and are conducted on the reasonable assumption that returns from a sample can adequately represent the whole, and that the voters during the short interval before election will not swing *en masse* from one candidate to another. As a matter of fact, it was found that people do answer such simple inquiries in sufficient numbers and with enough reliability to predict the popular presidential vote with only a slight margin of error.

[10] Watson, Goodwin B., *Experimentation and Measurement in Religious Education* (New York; The Association Press, 1927), pp. 55-57.

[11] Elmer, Manuel C., "Standardizing Social Research Methods," *Social Forces*, Vol. IV, No. 2, 1925, pp. 302-304.

[12] Robinson, Claude E., *Straw Votes* (New York; Columbia University Press, 1932).

Suggestions for Formulating Questionnaires

Six important rules for determining the items to be included in a questionnaire have been formulated by Professor Robert E. Chaddock and are here presented in summary form.

> "1. Accuracy and completeness of the resulting data are the chief aim in formulating the questions. Not all investigations require the same degree of accuracy in the recording data. . . . It is *spurious accuracy* to state the number of bushels of wheat produced annually in the United States to the last unit, because the amount is estimated and not counted.
>
> "2. The questions should be simple and definite. Qualifying adjectives and adverbs should be avoided because they increase the opportunity for subjective interpretation of the question. . . .
>
> "3. As few questions as possible should be included. Every added item increases the labor and cost of tabulation. Enumerators and informants are wearied by long lists of items and the accuracy of the result is impaired.
>
> "4. The questions should be such as can be answered truthfully and without bias. It is frequently necessary to convince the informants that their names are not to be used in connection with the answers. In other words the names must be kept in confidence while the data obtained are used for statistical purposes.
>
> "5. Inquiries should cover just the information

desired with as little chance as possible for two interpretations. For example, if the inquiry calls for the number of adult workers in a factory a definite age limit must be stated.

"6. The form of the schedule is important. It should conform in size to some one of the standard filing devices. The quality of the card should be such as to permit the use of ink, and sufficiently durable to stand handling and sorting many times without replacement. On the face of the schedule, attention to the spacing and to the kind of type used in printing the headings promotes both ease and accuracy in recording and tabulating the data. It is desirable to number or letter each item in the schedule in order to render identification easy and to facilitate tabulation."[13]

ENUMERATIONS

Closely connected with the questionnaire method is the problem of conducting a census by means of investigators who interview their informants face to face.

In this country the most elaborate enumeration is the decennial Census of Population taken by the federal government. The magnitude of this undertaking is indicated by the fact that the last, or fifteenth Census, taken in 1930, cost roughly $39,000,000 and embraced nearly 123,000,000 persons. In comparison, our first census, begun in 1790, was a very primitive affair. At that time there were only 4,000,000 inhabitants to be

[13] Chaddock, Robert E., *Principles and Methods of Statistics* (Boston; Houghton Mifflin Company, 1925), pp. 388-391.

SUPPLEMENTAL INSTRUCTIONS TO ENUMERATORS FOR POPULATION (INCLUDING UNEMPLOYMENT)

Please read these supplemental instructions carefully as they cover points not covered in your book of instructions

501. First days' work.—The supervisor, or some one designated by him, will review your first day's work, or the first work you do, on Population, Unemployment, and Agriculture, concerning which he will advice you. If any questions arise in the beginning of your work, ask the supervisor about them when you submit the first schedules for review. It is important that you get started right, for if your work is incomplete or inaccurate in any respect, it will be your duty, upon the request of the supervisor, to correct or complete it before you are paid.

502. Foreigners temporarily in the United States.—Foreigners visiting in the United States for a purely temporary period are not to be enumerated unless they are employed here. If they are working they are to be enumerated, no matter how short their intended stay.

503. Institutions.—If an institution which does not belong in the geographic area assigned you is shown in the description of your district, you should not enumerate such institution but notify your supervisor at once so that he may have the enumerator in whose district it belongs enumerate it. A note of this fact should also be made at the bottom of the description of your district on the inside of your portfolio.

504. Home-maker.—There will not be a home-maker for every family, as hired housekeepers are not to be reported as home-makers, and men are not to be reported as home-makers. A woman living alone and keeping house, however, is to be returned as a home-maker, and women who are boarding and lodging house keepers are to be returned as home-makers.

505. Post card for making appointment.—You will be furnished by your supervisor with a supply of post cards (Form 15–124), for making appointments with families who are out when you call. You can leave one of these cards at any residence

103050°—30

Exhibit 9. Sample of Instructions to Enumerators issued by the United States Bureau of the Census to insure uniformity of returns and interpretations.

counted and only five questions were asked of each person, yet the time necessary to fill out the schedules took eighteen months owing, in part, to the primitive character of the country, and also to the attitude of the people themselves. Some of our ancestors objected to being counted because of the disagreeable consequences that followed the enumeration of the children of Israel as recounted in the *Old Testament*.[14]

The 1930 Census obtained more than thirty items of information from each inhabitant, in addition to specialized inquiries on such topics as unemployment and the family. The mere task of tabulating and publishing the results required that the force of the Census Bureau in the city of Washington alone had to be expanded to a maximum of 6,720.

As is customary in all but very small enumerations, the original data were transferred to punch cards that could be classified on electrical tabulating machines. More than 300,000,000 cards were required to complete the work. As each one had to be verified by punching it over again the entire job was equivalent to punching about 600,000,000 cards.[15] Such facts testify to the magnitude of the work involved in conducting a large enumeration.[16]

Since a Census enumeration is so standardized, particular care must be exercised in defining the units. Dr.

[14] *The Story of the Census* (Washington, D. C.; Bureau of Census, 1915).

[15] "Progress of Work in the Census Bureau," *Journal of American Statistical Association*, Vol. XXVI, new series No. 176, December, 1931, p. 466.

[16] Cf. Truesdell, Leon E., "Methods Involved in the Federal Census of Population" in Stuart A. Rice's *Methods in Social Science*, pp. 197-219, for detailed statements of census methods.

Willford I. King has discussed the problem of limiting so simple a term as "farm." Is a five-acre market garden a farm? Does the word include the thousands of acres of government land ranged over by the cattle of a ranchman owning a single quarter section? If a man owns two eighty-acre tracts half-a-mile apart and works them both, do they constitute one or two farms? If he owns a plantation with a dozen tenants how many farms are there? It is essential that units be accurately and unmistakably defined.[17]

The importance of defining terms is seen in recent discussions of unemployment. What constitutes the "working population"? How shall you define "gainfully employed"? Seemingly academic questions such as these are fundamental to an intelligent discussion of pressing social problems like technological unemployment and standards of living.

Dr. F. Stuart Chapin has given a very intimate account of the problems that arose in the 1915 Massachusetts State Census with which he was connected as inspector of District 39. At that time the population of Massachusetts was less than 4,000,000. Thirty-five questions were asked of each person and the study required the services of a permanent staff numbering at its maximum about 200 persons and, in addition, a temporary field force of forty-three inspectors and 1,998 enumerators, who worked for periods varying from four to six weeks.

Before the actual count could be taken it was necessary to do what is invariably required in studies of this

[17] King, Willford I., *Elements of Statistical Method* (New York; The Macmillan Company, 1912), pp. 44-45.

VILLAGE Aston, Penna.

FAMILY NAME Brown,

NATIVE WHITE ☑
FOREIGN BORN WHITE ☐ (CHECK RACE)
NEGRO ☐
OTHER ☐

ADDRESS 5/ Chenango Road
LIVE IN VILLAGE: NO. ____ STREET
LIVE IN COUNTRY ____ ROAD

	ADULTS 21 YEARS OF AGE AND OVER FIRST NAMES		RELATION TO CHURCH: MEMBER	ADHERENT	NON-MEMBERS	PREFERENCE	CH. WORKER	NAME OR DENOMINATION OF CHURCH	DISTANCE FROM CHURCH	WHY NOT MEMBER OR WHY NO PREFERENCE	ATTEND CHURCH: TIMES PER YEAR	NEVER	WHY NEVER ATTEND	ATTEND S. S. YES	ATTEND S. S. NO	WHERE BORN: U. S. THIS TOWN	U. S. THIS STATE	U. S. ELSEWHERE	WHERE BORN: OTHER COUNTRY NAME COUNTRY OF BIRTH
A	FATHER William		✓					P.E.	Near		2/Yr.							✓	
B	MOTHER Sarah		✓					(St. Ann)										✓	
	OTHERS MALE	FEMALE																	
C		Margaret Ann	✓																
D																			
E																			
F																			
	MINORS UNDER 21 YEARS OF AGE BOYS	GIRLS	AGE																
G	William		17	✓										✓	✓				
H	James		10	✓										✓	✓				
I		Alice	15	✓										✓	✓				
J		Letitia	13	✓										✓	✓				
K																			

NAME OF SURVEYOR Howard Jones

VILLAGE STUDY ☐ HOUSEHOLD SURVEY ☑ DATE 4/17 1928

REVERSE SIDE

VILLAGE Aston STATE Penna.

OCCUPATIONS OF WAGE EARNERS 1. Hoyard feed store 2. 3.

YEARS LIVED IN THIS HOUSE 20 OWN OR RENT own

FAVORITE RECREATIONS: HEAD OF HOUSE chess HOMEMAKER bridge

CHILDREN movies, athletics.

NAMES OF MAGAZINES TAKEN Ladies Home Journal, Farm Journal, American Agriculturalist.

NUMBER OF YOUNG PEOPLE AWAY FROM HOME none WHY? WHERE?

OCCUPATION EDUCATION

WHY DO YOU LIVE IN THIS COMMUNITY settled with father, took up business here.

SUGGESTIONS FOR CHURCH some ways of keeping young folks interested in church.

SUGGESTIONS FOR COMMUNITY new school; limit number of factories along river, Aston village; ~~town~~

REMARKS

INSTITUTE OF SOCIAL AND RELIGIOUS RESEARCH, NEW YORK 28-77

Exhibit 10. CARDS FOR RECORDING RELIGIOUS HOUSEHOLD CANVASS IN A STUDY OF AMERICAN VILLAGES

type—to prepare a variety of statistical forms; to divide the state into enumeration districts; to put on a publicity program that would command the cooperation of the citizens in making an accurate enumeration, etc.[18]

When a census requires the services of a large number of different enumerators one of the important aspects of the preliminary period is the preparation of rules and regulations. Thus, the Federal Census employs an enumerators' instruction book which describes the duties and rights of the enumerator, taking up such questions as how to conduct the canvass, what persons are to be omitted from his count, and numerous other detailed problems. In addition, the exact meaning of each of the questions is described. Such instruction books are essential in order that the results of different workers may be entirely comparable.

Few organizations are in a position to conduct an elaborate population census but nevertheless many of the procedures found useful in these large governmental studies are applicable to the more limited canvasses undertaken by social investigators.

[18] Chapin, *op. cit.*, Chap. VI, pp. 127-147.

Chapter VI

EXPERIMENTATION AND TESTS

Increasingly significant bodies of social information are being gathered through the greater use of tests and experiments. The acclaim of intelligence tests and their wide use in schools has given added impetus to testing. To the natural scientist "test" and "experimentation" may conjure up controlled situations where one can alter at will any of the factors. In social research, however, the words frequently have a very loose meaning. Some so-called tests deal with absurd hypothetical situations and many alleged social experiments are not experiments at all. Therefore, experimentation must be clearly defined.

Experimentation

Rigidly controlled experiment has been considered the exclusive domain of the natural sciences, chiefly because the complexity of subject matter in the social sciences does not permit the laboratory's isolation of single factors. But the greater use of the experimental method deserves the careful attention of all students of society. It would seem that in social science wider application can be made of the method than its hitherto restricted use in classrooms and nurseries.

Because of its honored associations with the achieve-

ments of natural science, the word "experiment" is often employed to dress up irrelevant, totally inapplicable and trivial studies. In natural science, an experiment represents a conscious effort to prove or disprove an hypothesis by varying certain determinate factors under the control of the experimenter. Let us see what this implies and whether the method is applicable to social science.

In the first place, experimentation involves definite testing of an hypothesis, not a random groping after facts. In the second place, the conditions of the experiment must be under control of the experimenter, or at least all of the conditions of the particular experiment must be definitely known. Only by controlling the conditions, can you so vary one factor at a time as to establish or break down an hypothesis. In addition, there is the important problem of measuring the results. Measurement, in turn, involves a precise formulation of the units and concepts, e.g., the atom, the molecule, the meter, etc. Notable experiments are those, therefore, which with some degree of precision prove or disprove a crucial point. Experimentation is purposeful and is quite distinct from casual observation.

With these considerations in mind, look at social forces and the problems of human groups. All too often there are no acceptable units; there are no definite concepts; there is too much heterogeneity and complexity of subject matter; there is no controlling the variables; and there is no escaping the irrationality of the human material. Examine many of the so-called social "experiments" and you will find that the promoters have often been unconscious of their own exact pur-

pose. Furthermore, they sometimes fail to make any real effort to measure results. The introduction of a new social agency in an agricultural community is termed an "experiment" even though there is no clear conception of the objectives, no method of measuring results, and no way of telling what factors produced the changes that actually occur as a result of the "experiment."

But with these critical words to clear the ground there still remains a legitimate field of social "experimentation." It must be recognized that such experimentation will necessarily be of a restricted character. This is not to destroy experiment, but to delimit its grounds. Professor John Dewey thus stated the case for social experimentation:

> "Whenever purposes are employed deliberately and systematically for the sake of certain desired results, there it is possible, within limits, to determine the connection between the human factor and the actual occurrence and thus to get a complete social fact, namely the actual external occurrence in its human relationships. . . . Physical science did not develop because inquirers piled up a mass of facts about observed phenomena. It came into being when men intentionally experimented, on the basis of ideas and hypotheses, with observed phenomena to modify them and disclose new observations. This process is self-corrective and self-developing. Imperfect and even wrong hypotheses, *when acted upon,* brought to light significant phenomena which made improved ideas and improved

experimentations possible. The change from a passive and accumulative attitude into an active and productive one is the secret revealed by the progress of physical inquiry.

". . . if we want something to which the name 'social science' may be given, there is only one way to go about it, namely, by entering upon the path of social planning and control."[1]

Examples of Experimental Studies

Let us now turn to the description of a few actual experimental studies in social research. In an experiment with voters, Dr. Harold F. Gosnell selected two comparable units of approximately 3,000 persons each and, using one group as the control, tried to stimulate the members of the second by sending out a nonpartisan appeal to register at the polls. As a result of the appeal 75 per cent of these people actually voted compared with only 65 per cent among the control group. Presumably this ten point difference was owing to Dr. Gosnell's conscious stimulation.[2]

This study is worthy of attention because it raises a big methodological problem. Dr. Gosnell tried to eliminate many variables by selecting groups of people who were comparable in sex, nationality, social status, schooling, etc. But naturally there were many other factors, as he is well aware, that could not be isolated. It should also be noted that this experiment was con-

[1] Dewey, John, "Social Science and Social Control," *The New Republic,* Vol. LXVII, No. 869, July 29, 1931.

[2] Gosnell, Harold F., *Getting Out the Vote* (Chicago; University of Chicago Press, 1927).

ducted only after the factors of non-voting had been clearly identified by previous study. But with all this care, the conclusions to be drawn from the inquiry are distinctly limited in scope.

Significant social experiments have been conducted in the field of public health. One of the most notable of these is the Framingham Community Health and Tuberculosis Demonstration. In 1916 the National Association for the Study and Prevention of Tuberculosis started an elaborate experiment, financed by the Metropolitan Life Insurance Company, to find out whether it is possible through social education to reduce the incidence of tuberculosis. Framingham, Massachusetts, was selected as the community to be studied. As the first step in the process careful studies were made of the conditions prevailing before the experiment got under way. Then a health program was put in force and results were carefully recorded and changes measured. In five years the death rate from tuberculosis was reduced 67 per cent.[3]

About a decade ago the Milbank Memorial Fund started a similar experiment in Cattaraugus County, New York. By comparing annual death rates both before and after the campaign was inaugurated, and also by contrasting the situation in Cattaraugus County with that found in comparable adjacent counties, it has been possible to evaluate the results of the experiment.[4]

[3] National Tuberculosis Association, *Framingham Monograph* (Framingham, Mass., July, 1922), No. 9, p. 4.

[4] Sydenstricker, Edgar, "The Statistical Evaluation of the Results of Social Experiments in Public Health," *Journal of the American Statistical Association*, Vol. XXIII, new series No. 161-A, March, 1928, supplement Papers and Proceedings, p. 165.

It would seem that this type of social experimentation is worthy of further elaboration and expansion.

Laboratory Testing

Closely related to the type of social experiments just described are certain schemes recently devised by psychologists for testing human beings, especially babies and school children. Such tests include a wide field. If you examine the literature you will find many varieties, good and bad.

Legitimate tests have been variously classified, largely according to their uses. For example, Professor Kimball Young points out that apart from intelligence tests there are four general types of measurements of personal and social traits.[5]

There is the volition or will-temperament test devised by Downey, Trow, Moore, *et al.* There are tests for instinctive emotional tendencies by Landis, Watson, Pressey and Woodworth. These types belong in the field of individual psychology, but the third and fourth classes—the measurement of moral or social traits developed by Fernald, Bronner, May and Hartshorne and the measurement of general attitudes and interests developed by Hart, Thurstone and Allport—fall into the field of social psychology and sociology. Some tests of a distinctly social character are Dr. Watson's measure of fair-mindedness and Dr. Bogardus' yardstick of "social distance."[6]

[5] Young, Kimball, "The Measurement of Personal and Social Traits," *Proceedings of the American Sociological Society,* 1926, Vol. XXI, p. 92.

[6] *Ibid.,* pp. 93 f.

Form of Tests

Structurally, tests fall into certain common types. One very simple form of test is the familiar "yes-no" technique. An example is the test devised for school children by Doctors Hugh Hartshorne and Mark A. May, a section of which follows:

> "Vote by drawing a line under the word *Yes* or the word *No*. If your vote is 'yes' underline *Yes*. If your vote is 'no' underline *No*. Read each question carefully and vote on each one.
>
> "Would even an honest boy or girl tell a lie
>
> if it would keep him out of trouble? ..... Yes No
> if it would get him a good job?... Yes No
> if it would get him into a movie show? ..... Yes No
>
> "Would even an honest boy or girl steal
>
> if he could make money that way? Yes No
> if he wasn't likely to get caught?.. Yes No"[7]

Dr. Eduard C. Lindeman has raised the question whether the "yes" or "no" answer does not seriously impair the adequacy of many types of tests. He gives a concrete example of the futility of many "either-or" responses. Suppose you want to know what impelled a particular farmer to join a cooperative marketing association. If you ask the question according to the usual

[7] Hartshorne, Hugh; May, Mark A.; and Shuttleworth, Frank K., *Studies in the Organization of Character* (New York; The Macmillan Company, 1930), p. 58.

"yes" or "no" formula you may phrase the question: "Did you join the cooperative marketing association in order to increase your economic income?" A "yes" answer may be a true answer, but it would be only partially true. A "no" would at once be mistrusted. A man may join a cooperative society both to increase his economic income and also because his brother-in-law who holds the upper hand financially or socially may have said it was the thing to do. In addition, he may have been influenced by the appeal of some orator to "fight the middleman." Motives are seldom unmixed.[8]

Degree of Truth Tests

One method of avoiding the pitfalls of the "yes-no" form of answer is to employ the "degree of truth test." A number of alternatives are presented and the subjects are asked to record their reactions to them. One version of this type of test allows the informant to indicate whether the statement is true, false, partly true, partly false or doubtful. Another scheme is illustrated in the following test employed by Doctors Floyd Allport and Daniel Katz in their study of students' attitudes.

These investigators distributed a comprehensive questionnaire to 4,248 students at the University of Syracuse. To obtain uninhibited answers, each student was assured that his identity would be completely concealed. In addition, interest in the study was stimulated through articles in the college paper. Each of the seventy-five items on the questionnaire was arranged in the form of an attitude scale, the students being asked

[8] Lindeman, Eduard C., *Social Discovery* (New York; New Republic, Inc., 1925), pp. 180-181.

to check the particular answers or opinions with which they were in agreement. Among other things, the study tried to ascertain differences in the attitudes between fraternity and non-fraternity members, as well as differences in personal and social values regarding fraternities.

The investigators, for example, attempted to get at student attitudes toward fraternities by the following scale of opinions:

> "... All fraternities in Syracuse University should be abolished.
>
> "... A few should be permitted to exist at Syracuse University on condition that they play no part in campus activities and assume no leadership in social life.
>
> "... Fraternities should be permitted and allowed a reasonable degree of participation in college activities and social life.
>
> "... Fraternities should be encouraged by the University and given some precedence in participation in certain campus activities and social functions.
>
> "... Fraternities should be encouraged in every possible way at Syracuse. All student activities and social functions should be under their leadership."[9]

Obviously this scale gives more latitude than a mere "yes-no" choice, but it too is open to objections. According to Dr. L. L. Thurstone, the chief defect is that there is no real "scale." It is assumed that the steps

[9] Katz, Daniel, and Allport, Floyd H., *Students' Attitudes* (Syracuse; The Craftsman Press, 1932), pp. 130-141.

between the five opinions about fraternities are equal, and that one opinion differs from another by a definite difference in the scale. On the contrary, says Dr. Thurstone, a scale must first be built up to determine just how much one opinion varies from another.

Thurstone's Attitude Tests

Professor Thurstone contends that an essential characteristic of a scale for measuring attitudes is that it be so devised that equal steps or intervals on the scale seem to most people to represent equally noticeable shifts in attitudes.[10]

The method of building such a scale is complicated. Regarding militarism *vs.* pacifism, for example, some 130 brief, relevant, representative statements were selected covering all possible gradations from one extreme of militarism to the other extreme of pacifism. The statements of opinion were mimeographed on separate sheets and given to about 350 individuals who were asked to arrange the opinions into eleven piles. Only the most extreme piles and the neutral position were labeled as guides—"extremely militaristic," "neutral" and "extremely pacifistic." It should be noted that these 350 individuals were acting as judges; they were not being tested.

Results were then tabulated for each statement separately, showing on a scale of eleven units the point above and below which half the judgments fell. Thus Dr. Thurstone finally created a yardstick showing the numerical value of each of the 130 opinions on a scale

[10] Thurstone, L. L., "Attitudes Can Be Measured," *American Journal of Sociology*, Vol. XXXIII, No. 4, January, 1928, pp. 529 f.

of eleven units. The difference between any two opinions was then readily calculable, and it was assumed that equal distances on the scale represent equal differences of opinion.

Before applying the scale so formed, the 130 opinions were cut down to about forty by weeding out those statements that were irrelevant, ambiguous or inconsistent, and by selecting those that gave a more or less uniformly graduated scale. Of course, perfectly uniform graduation is impossible because the numerical value of the statements will not differ from one another by exactly equal intervals on the scale.

The test is now ready to be given to any group whose attitudes you want to measure. Each person is asked to check statements which express his attitude on the subject of pacificism *vs.* militarism. The final score of any individual is the mean scale value of all the opinions which he indorses. Actual testing, it will be seen, is much simpler than the process of constructing the scale.

What is the reason for choosing as many judges as possible and for plotting scale values? The whole process can best be understood in the light of Professor James McKeen Cattell's work in psycho-physics which greatly influenced Dr. Thurstone. When Dr. Cattell asked people to discriminate among weights, he found that probably 75 per cent of the persons participating in an experiment could perceive a difference of one unit while virtually everyone could sense a difference of two units. Professor Thurstone contends that, conversely, two stimuli may be considered to be actually different by a quantity determined by the percentage

of persons who can perceive the difference between the two stimuli. Hence it is possible to use the proportion of readers who agree about the ranking of any two statements as a basis for actual measurement. On this assumption Dr. Thurstone has devised a whole series of tests dealing with such topics as the League of Nations, foreign missions, prohibition, etc.

Other Tests

Other types of tests include the so-called "inference," the "moral judgment," the "arguments" and the "generalization" tests. The inference test consists in stating a fact followed by a number of alternative conclusions, the subject being asked to check the conclusion that seems to him "fairly" based on the facts given. The moral judgment test employs a statement of fact, followed by a number of moral judgments about it with instructions to check the one with which the subject is most fully in agreement. These have been found valuable for testing prejudices, especially where the tester has been ingenious in framing his questions to check the subject in more than one way. Such tests have been criticized because they require logical faculties rather than the display of particular attitudes and because numerous questions and situations seem so purely fantastic and artificial that they do not elicit serious consideration. Hypothetical questions which start with the phrase, "If you were on a desert isle," appear to fall into this class.

The arguments test consists of a statement followed by arguments in support of or in opposition to the proposal and the subject is asked to state whether he con-

siders the argument "strong" or "weak." This test is based on the common tendency of most people to mark as strong those arguments that reflect their own attitudes and to consider as weak all arguments of the opposition. The generalization test consists of statements of opinion followed by such words as "all, most, many, few, none" and the individual being tested is asked to indicate the word that, in his opinion, is most applicable to that particular generalization.

The tests just described are only a few of the variety of yardsticks already in common use. Dr. Julius B. Maller's *Character and Personality Tests* describes more than 300 of them devised in this country and abroad.[11] Many tests can be purchased in printed form ready for use, thus saving you the time and energy involved in creating them.

Creating New Tests

Despite the hundreds of tests already devised, a social investigator may find it necessary to build up entirely new sets of tests to meet his particular purposes. If so, how should you go about constructing them?[12]

First, you must ask yourself, what are you measuring? How do you define it and analyze it? Are you seeking to weigh information, attitudes or mental and emotional processes? Suppose it is honesty you seek to measure. It must be not a "general" test but a test of honesty under particular conditions. Thus Doctors Hugh Hart-

[11] Maller, Julius B., *Character and Personality Tests; A Bibliography of 300 Tests* (New York; Teachers College, Columbia University, 1932).

[12] Cf. Watson, Goodwin B., *Experimentation and Measurement in Religious Education* (New York; The Association Press, 1927), pp. 126-170.

TEST 2

RECOGNITIONS

This is to test your ability to recognize whether a thing is cheating, lying, stealing or something else.

After each statement are five letters C. L. S. X. J. If the deed is a case of Cheating, draw a circle around the C; if it is Lying, around the L; if it is Stealing, around the S. If it is something wrong, but not either cheating, lying or stealing, put a circle around the X. If it is not wrong at all, put a circle around the J. If the thing is both cheating and lying or stealing and lying, or all three, encircle all the letters you need to in order to express your opinion.

SAMPLE :

(a) Picking someone's pocket ..... C. L. (S) X. J.

(b) Playing hookey ..... C. L. S. (X) J.

(c) Climbing trees ..... C. L. S. X. (J)

Picking a pocket is stealing, so the S is encircled. Playing hookey is wrong but it is not cheating, lying, or stealing, so the X is encircled. There is nothing wrong about climbing trees, so the J is encircled.

Begin here and encircle the right letters. If you do not know what a statement means, skip it.

1. Carrying your bundles home instead of having them sent ..... C. L. S. X. J.
2. Taking care of the baby when he is fussy ..... C. L. S. X. J.
3. Doing your homework while all your friends have gone to a party ..... C. L. S. X. J.
4. Saying you had for dinner what you only wish you had, so as to make a good impression ..... C. L. S. X. J.
5. Getting a second helping of ice cream by saying you haven't had any ..... C. L. S. X. J.
6. Riding on the back of a truck without the driver's knowing it ..... C. L. S. X. J.
7. Taking a lot of stationery from a hotel to your home and making private use of it C. L. S. X. J.
8. Bullying younger children ..... C. L. S. X. J.
9. Calling people bad names ..... C. L. S. X. J.
10. Fighting with everyone who calls you names ..... C. L. S. X. J.
11. Not wanting to worry your mother, telling her you were kept after school when as a matter of fact you went to a fire ..... C. L. S. X. J.
12. Using street car transfers that are out of date ..... C. L. S. X. J.
13. Finding a purse with money in it and keeping it when you know the owner and could easily restore it to him ..... C. L. S. X. J.
14. Carrying away small articles from a backyard as a Hallowe'en trick ..... C. L. S. X. J.
15. Cheering for the winning side in a game ..... C. L. S. X. J.
16. Handing in another pupil's work as though it were your own ..... C. L. S. X. J.
17. Putting off until tomorrow what you can do today ..... C. L. S. X. J.
18. Signing your parent's name to an excuse ..... C. L. S. X. J.

Exhibit 11. EXAMPLE FROM A TEST DEVISED BY DOCTORS HUGH HARTSHORNE AND MARK A. MAY TO TEST MORAL KNOWLEDGE OF CHILDREN

shorne and Mark A. May have devised a number of tests for honesty in different situations—at home, as exhibited in athletic contests, as revealed in parlor games, etc.

Second, what shall be the content of your test? Here much ingenuity and imagination are frequently necessary as well as intimate knowledge of the subject-matter being tested.

Third, in what form shall the various elements of the test be presented? At present the objectively scored or controlled-answer type of test is more in use than the older discursive types that permitted the subject to write out his thoughts *in extenso*.

A crucial question in any test is, "What does it measure?" One of the best illustrations of this problem occurred in connection with intelligence tests. A storm of bitter criticism and abuse was heaped upon intelligence testers—in many cases unfairly since the chief attack was directed against ill-founded conclusions from the work, not against the work itself.[13] Nevertheless, as Professor Edward L. Thorndike has pointed out, the results of intelligence tests still present three fundamental defects:

> "Just what they measure is not known; how far is it proper to add, subtract, multiply, divide and compute ratios with the measures obtained is not known; just what the measures obtained signify concerning intellect is not known."[14]

[13] Pihlblad, C. T., "Mental Tests and Social Theory," *Journal of Applied Sociology*, Vol. X, No. 6, July, 1906, pp. 527-532.

[14] Thorndike, Edward L., "Measurements of Intelligence, I. Present Status," *Psychological Review*, Vol. XXXI, No. 3, May, 1924, p. 219.

One group holds that validation of a test is unnecessary; the real question is—how can it be used? Thus, from this point of view the question whether the intelligence test measures intelligence is irrelevant. The important consideration is that it does measure something and this something has been shown to have a definite relation to other abilities, e.g., success in business or in school. It should be noted that such close correspondence is really a form of validating the test.

Many tests are at fault because of ambiguity of content and the arbitrariness of the units chosen, which brings us back again to the question—how validate a test? Professor Goodwin B. Watson describes several methods in vogue. One is to check the results of the tests against measurements supposedly better or more widely accepted. A boy with a high intelligence quotient presumably should get good grades at school. Or you can compare selected groups—a test for occupational fitness should show clear differences between samples of good, mediocre and poor workmen. Then, too, you may observe differences in the results of a test when given under varying stimuli. Again, you may determine by logical analysis that a test designed to measure ethical knowledge is really a vocabulary test, or a test of religious attitudes really measures conformity to adult standards.

Further ingenious techniques have been evolved for validating attitude tests. Thus Dr. Samuel A. Stouffer compared the attitudes secured by the case method and the statistical method. First, he gave an attitude test on prohibition, constructed on Dr. Thurstone's scale principle, to several hundred students at the University of Chicago. Next the students were asked to write 1,000-

word accounts of their experiences, feelings and opinions on the subject of prohibition. These case histories were then read independently by four carefully selected judges and rated on a scale showing the extent to which the attitudes were favorable or unfavorable toward the prohibition law.

The judges were chosen for their knowledge of the theoretical literature on attitudes, their experience in interpreting case materials and their insight into human experience. They were told to use whatever concepts of attitudes on prohibition they chose, to set their own standards of favorable or unfavorable, but to try to judge all papers by the same standards. The two sets of results corresponded closely.

The students were also asked to rate themselves on a scale similar to that used by the judges. These self-rating scores also corresponded closely with the results of the attitude test and with the ratings of the judges.[15] Finally the superintendent of the Illinois Anti-Saloon League and the secretary of the Illinois Association Opposed to Prohibition were requested to read and rate a random sample of ninety-nine cases. They too came to highly similar conclusions.[16]

Objections to Testing

Many objections have been raised to attitude tests. Are not the scales valid only for the type of people who

[15] The intercorrelation of ratings of each judge with ratings of each other judge was + 0.87 with a range from + 0.85 to + 0.89. The scores of the judges correlated with those of the attitude test gave a coefficient of + 0.86 while the self-rating scores with attitude test scores showed + 0.80.

[16] Stouffer, S. A., "Experimental Comparison of A Statistical and A Case History Technique of Attitude Research," *Proceedings American Sociological Society*, Vol. XXV, 1930, pp. 154-156.

schematize attitudes in this way? Does language behavior give an accurate picture of the individual's actual behavior? Certainly many people preach one thing and practice another. Professor Pitirim A. Sorokin has attempted to check language behavior with actual behavior in a test given to his sociology classes. He asked his students to contribute to three causes—to purchase a calculating machine for class use, to help three brilliant American students whose families were impoverished and homeless owing to floods, and to aid Chinese and Russian students suffering from famine. The amount of money collected was taken to reflect the actual behavior response of the students to the three causes. As a matter of fact, the largest contributions were given to the purchasing of the adding machine and least for foreign famine relief. The conclusion seems warranted that the students actually proceeded on the assumption that charity begins at home. Shortly afterwards, however, a true-false test was submitted to these same students asking whether human beings should not be equally ready to help any and all of their fellows. Amusingly enough most of the students marked this statement as true. Of course, no generalizations can be drawn from such a "test."[17]

Assuming that an attitude test has been created that measures what it purports to measure, how reliable or consistent are the findings? Reliability may be measured in terms of the correlation between the results obtained when the test is given to a particular group and when the same test is repeated over again to the same peo-

[17] Sorokin, Pitirim, "Experimente zur Soziologie," *Zeitschrift für Voelkerpsychologie und Soziologie,* Vol. IV, 1928.

ple,[18] no intervening factors having influenced the group. Sometimes, instead of repeating the test, it is divided into two sections, and the same persons are given first one half and then the other. The results are then compared to ascertain whether the two sets of findings are similar.

Two further problems are involved in testing—objectivity and comparability. Objectivity requires that the test be presented in so uniform a manner that the results will be the same no matter who gives it. Such uniformity can best be achieved by standardizing the entire procedure of the test, including the directions, methods of scoring, etc.[19]

Comparability requires that norms must be established. Only in this way can the results of a particular test be compared with "normal" results.

The steps through which the experimenter will ordinarily proceed in the development of a new test are thus summarized by Dr. Watson:

"1. Analyze and define just what is to be measured.
2. Select the most suitable content.
3. Utilize the most appropriate forms for presenting this content.
4. Develop adequate directions.
5. Try out the test and revise it.
6. Develop a scoring scheme.
7. Standardize the test upon representative groups."[20]

[18] Compare Professor Read Bain's repetition of questionnaire cited in Chapter V above.

[19] McCall, William A., *et al.*, "The Multi-Mental Scale," *Teachers College Record*, Vol. XXVII, No. 2, October, 1925, p. 93.

[20] Watson, Goodwin B., *op. cit.*, p. 126.

It will readily be seen that testing has grown to such complex proportions that only the expert is at home in the field. The use of tests is beset with unusual difficulties. The tyro will do well to ponder long and hard before he himself embarks upon any uncharted sea of testing.[21]

[21] Boring, Edwin G., "The Logic of the Normal Law of Error in Mental Measurement," *American Journal of Psychology*, Vol. XXXI, No. 1, January, 1920, p. 1.

Chapter VII

COMBINING METHODS OF STUDY

The anatomical method of dissecting social research which has been employed up to this point may have given the impression that the examination of documentary materials as well as the techniques of observation, interviewing, questionnaires, tests and experimentation are isolated and disparate methods. This simplified treatment was necessary for the purpose of exposition and analysis. As such it presents entirely too elementary and schematized a picture of research. Few studies, and, as a rule, only those of a distinctly limited nature involve only one of these approaches. Indeed, if a person examines the research results actually published, he may wonder not only in what proportion and order these various techniques enter into the fact-gathering process, but also whether they have a separate reality.

In many pieces of research the "facts" as such tend to be so woven together that one may not see readily how they are related to these basic techniques. An individual looking at Census returns forgets that behind that host of figures are schedules and enumerations, and that behind the payroll returns of the Bureau of Statistics are sets of questionnaires. Even court reports

and prison records are the result of schedules, interviews and questionnaires.

In the previous chapters emphasis has been placed on the uses and pitfalls of different methods of data gathering. Now, however, the purpose will be to show how these separate techniques are combined in particular studies. The research process generally represents a blending of different approaches. In practice, interviews, tests and observation are not employed in isolation. Rather, the majority of studies are the product of several techniques. This statement is especially applicable to social surveys. Most of the 2,775 studies listed in the recent *Bibliography of Social Surveys*[1] have employed a whole series of research tools.

The Survey

The survey is used in many senses but technically the word has a very distinct connotation. Mr. Shelby M. Harrison has defined it as

> ". . . a cooperative undertaking which applies scientific method to the study and treatment of current related social problems and conditions having definite geographical limits and bearings, plus such a spreading of its facts, conclusions and recommendations as will make them, as far as possible, the common knowledge of the community and a force for intelligent coordinated action."[2]

Thus the survey is interested not merely in bringing together the facts on definite social problems but in

[1] Eaton, Allen, and Harrison, Shelby M., *A Bibliography of Social Surveys* (New York; Russell Sage Foundation, 1930).

[2] Eaton and Harrison, *op. cit.*, Introduction, p. xxiv.

arousing public opinion to take a hand in their solution. To this end it calls on the civic worker, the engineer, the surveyor, the physician, the city planner, the educator and the journalist as well as the social worker to study and analyze pertinent data.

Surveys have been divided into two classes: the general broad studies of the activities of an area—state, city, region, village or parish—and the specialized surveys of particular aspects of contemporary life in a particular locality, e.g., crime surveys, education surveys, health surveys, surveys of industrial conditions, delinquency, etc.

The survey movement is undoubtedly very old. The request of William the Conqueror that his sheriffs give him an accounting which resulted in the *Domesday Book* obviously reflects the survey idea. The modern survey, however, may be said to have started with Charles Booth's monumental study of poverty in London begun in 1886 which appeared in the seventeen volumes of *Life and Labour of the People in London.* Booth's avowed aim was to show the numerical relation which poverty, misery and depravity bear to regular earnings and comparative comfort and to describe the general conditions under which each class lives.[3]

Booth's Study

The point of departure for Booth's inquiry was an earlier governmental Census which had secured figures he believed were unreliable. He, therefore, set out to revise the Census estimates, originally obtained from

[3] Booth, Charles, *Life and Labour of the People in London* (London; The Macmillan Company, 1902 ed.). See Vol. I of the Poverty Series, p. 6.

schedules filled out by each householder. How go about so vast a task? He would have liked to make personal inquiry of each family in London and to check by first-hand observation and interviews the statistics gathered by the Census. Obviously no single person or even the large staff of assistants he employed could do this.

Booth learned that school board visitors or attendance officers had in the course of their work made house-to-house visits in every area of London and had carefully recorded knowledge of each family visited. He therefore began to interview these attendance officers, of whom there were sixty-six in East London alone. The method consisted of "wholesale interviewing," as Beatrice Webb has called it. The conferences with each visitor lasted about twenty hours! During these prolonged conversations a secretary took notes and in addition made extracts from the visitors' own schedules. By this means Booth obtained forty-six notebooks filled with much valuable information about the poor of London covering such objective items as occupation, rooms in dwelling, number of children, lodgers, etc. He records that these books were "mines of information." They were referred to again and again at each stage of the work. So valuable did they prove that he came later to regret that they had not been more slowly and deliberately prepared—"more stuffed with facts" than they actually were. During the inquiry he continually improved the process of collection and only really "learned the trade" by the time the work was finished.[4]

After the source books had been compiled, Booth

[4] Booth, *op. cit.*, pp. 24-25.

and his helpers visited many neighborhoods to confirm the observations of the attendance officers. They interviewed teachers, superintendents of dwelling houses, rent collectors, sanitary inspectors, Charity Organization Society visitors and ministers. The information thus gained became the basis for maps showing in color the relative density and poverty in various London districts. The information was also compiled in tabular form and constituted the main body of information presented in the final reports.

To gain a more intimate picture of conditions, Booth at various times became a "participant observer." He took up quarters in districts where he was not known and as a lodger shared the lives of the poorer classes. He thus became intimately acquainted with a number of working people and the lives and habits of many others came naturally under his eye.[5]

Booth's schedules, interviews and carefully compiled statistics, enriched by personal observation, enabled him to prepare the *Poverty Series* which had such a decisive effect on English poor relief. So well has it stood the test of time that it became the starting point for the new survey of London recently undertaken by the London School of Economics.[6]

The Pittsburgh Survey

The first and possibly the most famous American survey of the broad general type was conducted by the Russell Sage Foundation in Pittsburgh. Its purpose was

[5] *Ibid.*, p. 158.

[6] London School of Economics and Political Science, *New Survey of London Life and Labour*, Vol. I, *Forty Years of Change* (London; P. S. King & Son, 1930).

to throw light on social and economic forces, not by theoretical discussion of them, but by displaying the objective facts of life and labor in a particular city.[7]

The Pittsburgh Survey investigated wages, hours of work and industrial conditions of both men and women and studied family budgets, housing conditions and industrial accidents among steel workers. It secured information about public health, hospitalization, sanitary problems and crime, as well as data on playgrounds, recreation, city planning and dependent children.

Such an elaborate enterprise may seem to have little value for the lone research worker, yet, as a matter of fact, most aspects of the Pittsburgh Survey were made by individual investigators studying a particular topic and reporting in a separate monograph, e.g., Mrs. Florence Kelley studied the system of Factory Inspection, Professor John A. Fitch the steel workers, Mr. James Forbes the police and crime, and Miss Margaret Byington, the households of Homestead.

An investigator "working on his own" will probably find a description of one of these individual studies more helpful than an account of the total enterprise. By means of schedules, interviews and direct observation Miss Byington attempted to study the budgets of a number of representative workers' families. She began by cultivating friendly relations with working people, but had difficulty overcoming the natural suspicion of workers whose memories were still bitter over a desperate strike of fifteen years before. She finally managed to get ninety families to keep accurate accounts. She

[7] Kellogg, Paul U., Appendix E in Russell Sage Foundation, *The Pittsburgh District Civic Frontage* (New York; Survey Associates, 1914), p. 494.

visited these families frequently "to see how the books were getting on," thereby gaining an intimate knowledge of the family.

One of her assistants became a "participant observer" and lived in the town like other residents, sending her son to the Homestead schools. In addition, a young Slavic widow who had been an interpreter in the Homestead courts and had unusual insight into Slavic customs and attitudes went from house to house collecting the budgets from the immigrants.

The chief source of data was the information kept by the women themselves which was transferred to cards and tabulated. Notes were made after each visit concerning home conditions, family life and personal details. Then, too, interviews were held with town officials, business men and physicians. Thus it will be seen that even this small unit of the Pittsburgh Survey employed a whole series of research techniques.[8]

The Pittsburgh Survey was followed by a large number of other general community surveys both in this country and abroad. Indeed, the recent *Bibliography of Social Surveys*[9] lists more than 150 surveys of the generalized type dealing with such widely scattered places as Springfield, Illinois; Peking (Peiping), China; and Constantinople (Istanbul), Turkey.

Virtually all the early community surveys had as their main objective the development of programs of action, but lately the function of arriving at plans of action has been subject to serious question. People are increas-

[8] Byington, Margaret, *Homestead: The Households of a Mill Town* (New York; Charities Publication Committee, Russell Sage Foundation, 1910), Chap. III and Appendix I.

[9] Eaton and Harrison, *op. cit.*, Part I.

ingly aware that community programs do not necessarily flow from surveys. To quote the words of a school principal during an investigation of the bituminous coal fields:

> "Another investigation? That makes the third in the last two months. First the State Labor crowd, then some welfare group, now Washington. Oh, I know. You want to get the facts and you can't take one another's word for them. Lady, we've been surveyed to death down here. What we need is a little action. I've been here since 1916—through most of the investigations. You've seen the U. S. Coal Commission report? Eleven months' work with a whole army of experts and two years to get the results published. Well, they said all there was to be said about coal in 1925. The things that were wrong then are worse now, just as they knew they'd be. More men out of work, more kids starving. Too bad we can't feed them reports."[10]

Middletown

One of the recent surveys that frankly abandoned the aim of programmizing was *Middletown*, which contrasted conditions in a typical mid-western city in 1924 with its activities in 1890.[11] The investigators, Dr. and Mrs. Robert S. Lynd, together with several assistants, set out to study a small city along six main lines: getting a living, making a home, training the young, following religious practices, using leisure time and engaging in

[10] Quoted by Lillian Symes in "The Great Fact-Finding Farce," *Harper's Monthly Magazine*, Vol. 164, February, 1932, p. 354.

[11] Lynd, Robert S. and Helen Merrell, *Middletown* (New York; Harcourt, Brace and Company, 1929).

COMMUNITY SCHEDULE

Name Wellville, Minn. Date Apr. 17-24/1930

County Faribault State Minn. Population

Population				Neighborhoods		
Number of	Village	O.C.	Total	Name	Pop.	Characteristics
Native-born	See notes use census counts	960	see notes	North Wellville	75	church, store, community, home etc.
Foreign-born		13				
Negroes		0		Vallon Springs	60	Baptist service, W.C.T.U. Home Bureau, etc. - See notes
Total		973				

ECONOMIC

Type of farming, general, truck, dairy, etc. Dairying predominant; poultry increased since 1924 survey; potatoes decreased, — see notes following.

Approximate No. of farm-owner operators 229 Approximate No. of farm tenants 11

Do local people notice any changes in these two respects since 1925? No; probably a decrease in tenancy, but too slow to become evident in 5 years time.

What? See notes on tenancy.

Is there a feeling of coöperation between the farmers and the business men in the village or city center? Yes - decidedly.

In what way is this feeling or its lack manifested? The village is a "farmer-run" place; compare previous studies

What changes have there been in this respect since 1925? Very few. Why? State highway never built notes.

Use the remaining space and blank pages to answer fully the above 4 questions.

SOCIAL ORGANIZATIONS

*See notes on community hall.

Name	Date Organized	No. of Members M.	No. of Members F.	Average Attendance	% Members from Country	Expenditures past year Non-Ins.	Own Hall	Organized or reorganized within 5 years	Contributions to Community Life
~~Home Bureau~~	1918	—	106 ✓	25	20%	$350.00	yes*	No	
D.A.R.	1914	—	68 ✓	20	40	250.00	No	No	
~~Vaughn Springs~~	~~1926~~	~~80~~	~~0~~	~~48~~	~~100~~	~~mostly yearly now~~			See notes
~~Missionary Society~~ W.C.T.U.	~~1904~~	~~0~~	~~20~~ ✓	~~25~~	~~100~~	~~$135.00~~	~~No~~	~~no~~ ✓	~~See notes under church~~
Girl Scouts	1926	0	22 ✓	20	27%	$180	[illegible]	No ✓	
Amer. Leg.	1920	21	0 ✓	9	see notes	399.44	Rent	no.	
I.O.O.F.	1910	54	0 ✓	12	25%	225 [illegible]	rent	no	
Boy Rangers	1921	22	0 ✓	18	10%	0	No	no.	
Young Farmers	1928	25	—	22	90%	35	No	Org. ✓	see notes
F.A.M.	1855	188	0 ✓	25	12%	$500	yes	No ✓	
Card clubs	(young women - middle aged women, men						Card club prizes.		
Band	1920	22	0 ✓	17	90%	350	no	no	
Wellville Cemetery Ass.									see notes

All such organizations as lodges, Red Cross, Parent-Teachers Assoc., Grange, Farmers' Union, Boys or Girls Scouts, American Legion, Chamber of Commerce, band, orchestra, singing society, labor union, athletic club, etc., should be listed on this page. Note the interests and objective of important organizations.

What changes have taken place in social organization of village? see notes

What organizations present in 1925 have died? ① P.T.A., ② G.A.R., ③ Boy scouts

Why? ① Agency taken over by D.A.R.; ② last two members gone; ③ become Boy Rangers.

Exhibit 12. Two pages from a much longer schedule used in surveying American villages. Other phases of the schedule covered industries, village finances, farmers' cooperatives, social activities, churches and schools. In addition loose blank sheets were included with the printed schedules to make it easy for the worker to amplify his observations.

community activities. They attempted to catch these activities in flux, as it were, and to give a moving picture of community life. Their report is filled with many intimate glimpses of "real life" fitted into the six-fold pattern adopted. Not the least of the book's values lies in the writing ability of the authors, but for the moment we are concerned with the problem of how the investigators got their materials. Middletown was selected largely as the result of a search for a typical small city, based upon a comparison of Census returns.

The workers opened an office in the business district of the town with the announced intention "of studying the growth of the city," and tried to fit into the community's activities, "sharing the life of the city, making friends and assuming local ties and obligations." They set about observing what people were doing in as detached a manner as possible and studied institutions, not for their own sake "but always with reference to the life-activities" they served.

The Lynds observed the usual round of community activities from the standpoint of the "participant observer." They visited schools, churches, club meetings, literary circles and labor union meetings; dined with ministers, industrial workers and businessmen, and Dr. Lynd even joined the Rotary Club. At the same time the workers took inconspicuous notes, writing them up "according to the form adopted." This procedure is significant for it indicates that theirs was no mere soaking in of atmosphere, but a planned process of observation, based on schedules drawn up "in terms of the specific behavior observed in the city."

The interviews varied from casual talks with street

car conductors, janitors and barbers to carefully planned conversations with Y.M.C.A. secretaries, ministers, school superintendents and others "especially qualified to give certain bodies of information." Usually these formal interviews were arranged only after the investigators had clear notions of what they wanted to know.

Formal questionnaires were sent to 400 clubs concerning their memberships and activities, while another set sought the attitudes of 550 second, third and fourth year high-school boys and girls on public and personal matters. Schedules were also filled out during the course of rather lengthy interviews with 124 working class and forty business class families concerning a variety of subjects—education of children, religious beliefs, habits of mothers' families, etc.

Besides directed observation, planned interviews, casual conversations and formal questionnaires the Middletown investigators also examined existing documentary materials, compiled statistics, and read the newspapers of 1890 as well as the minutes of clubs, of the Board of Education, humane societies, city council and the like. They studied histories of the city, county and state as well as city directories, maps and Chamber of Commerce publications. They were fortunate in getting two unusually detailed diaries—one by a Protestant merchant and the other by a Catholic baker—covering the period 1886-1900, and found other less complete diaries and scrapbooks.

The investigators also had the task of going through court files and school records, State reports and yearbooks, city and county records and census returns. In this way, they gathered statistics on wages, steadiness

of employment, industrial accidents, club and church membership, church attendance and contributions, library and periodical circulation, and moving picture attendance. Most of this information could be secured directly from officials in the city or in the State capital, but in a few cases it had to be compiled through special tabulations of existing records.

This summary of the methods of investigation employed in *Middletown* makes it clear that research work usually requires more than proficiency in one particular technique. Time and again the really creative part of a social inquiry is deciding how different approaches should be combined to yield the most fruitful results.

Cleveland School Surveys

Despite the large number of undifferentiated surveys the tendency during the past generation has been away from broad inquiries toward more limited researches in specialized fields. One charge leveled at the old-fashioned survey is that its scope is so broad that there is no real point to the inquiry. This weakness has led during recent years to more specialized studies, such as those embodied in the Cleveland School Surveys, the Survey of American Indian Administration, and the Illinois and Missouri Crime Surveys. *The Bibliography of Social Surveys* includes more than 2,700 investigations of this type.

The school survey conducted by the Cleveland Foundation resulted in twenty-five monographs on various aspects of the public school system of that city, with a summary volume by Colonel Leonard P. Ayres, director

of the enterprise.[12] Each of the monographs was prepared by a specialist and published separately.

For example, the investigation into school work developed special tests for measuring the handwriting ability of the pupils and employed performance tests in spelling, handwriting, arithmetic and reading. Workers visited classes and kept careful notes on schedules which called not only for precise quantitative data but also for qualitative items, such as comments on the type of teaching. Interviews with teachers and superintendents and other school officials yielded another body of information as did also school records and statistics. In short, even this one unit of the Cleveland Survey exhibits a complex blending of techniques.

Investigation of Indian Administration

Another interesting survey of the specialized type was that on Indian affairs undertaken by the Institute for Government Research at the behest of the Secretary of the Interior.[13] A staff was chosen including one specialist each on family relations, law, economic conditions, education, health and agriculture, together with a well-known Indian to act as interpreter and contact man. Available source materials had already been compiled through the earlier work of another member of the staff of the Institute for Government Research, and, in addition, valuable bodies of data were found both in

[12] Ayres, Leonard P., *The Cleveland School Survey*, Summary Volume (Cleveland; The Survey Committee of the Cleveland Foundation, 1917).

[13] Meriam, Lewis, and Associates, *The Problem of Indian Administration* (Baltimore; Johns Hopkins Press, 1928).

the Census and in the annual reports of the Commissioner of Indian Affairs.

An itinerary was planned so that the entire staff might visit the larger reservations and individual members the smaller places. There are 350,000 Indians scattered among twenty-three states, so that the amount of traveling involved was considerable.

Before going to any reservation the investigators consulted the narrative reports of the superintendents of the Indian office, and also Congressional hearings, reports of the Bureau of Ethnology and of the Smithsonian Institution dealing with the particular tribe to be visited.

As soon as the Commission arrived at a reservation, conferences were held with the superintendent and some of his assistants covering general conditions. At these meetings the primary aim was to discover the views of the officials themselves. Most of the superintendents were quite communicative and willing to air their views freely, but others had to be questioned closely, not, as the investigators observe, because of unwillingness to talk, but largely because of differences in temperament.

At each reservation the inquirers checked and verified the statistics they had received in Washington; then, guided largely by the advice of the superintendents, they attempted to study sample conditions among Indian farms and households. The investigators asked the superintendents to show them not the best nor the worst but the average conditions and often conducted independent investigations to check up on the adequacy of the sample recommended.

The individual investigators looked into those aspects of the work in which they were primarily interested. The health specialist consulted directly with physicians and nurses and visited hospitals and clinics. In many cases he accompanied the doctors on their rounds, watching the examinations, treatments and operations of patients, checking up on the diagnosis of cases, and on mortality and morbidity statistics. He also inspected the dormitories and examined the kitchens of a great many hospitals and kept careful records of his observations.

The educational specialist made contacts with school superintendents, principals, teachers and inspectors and also mingled with Indian children in the classrooms. He visited Indian homes and councils and made definite efforts to get first-hand impressions of the school problems from the Indians themselves.

The expert on agriculture tried to observe samples of all types of farms, even making long journeys into the mountains to do so. He induced local farmers to take him around to their neighbors and talked with many Indians concerning their agricultural problems. In like manner the other specialists undertook intensive studies along their main lines of interest.

General conferences were held with groups of Indians. Often at these meetings the superintendent of the reservation was tactfully asked to leave so that the Indians might air their opinions freely. Always it was made clear that the investigating staff was not a grievance committee with powers to transmit recommendations to the Secretary of the Interior but merely a fact-finding committee attempting to get a general picture

of Indian affairs. Of course, one wonders whether the Indians were able to appreciate such a fine distinction.

Interviews with missionaries, with Indian traders who had had contact with the Indians, and with various friends of the Indians, as well as with experts on technical subjects connected with the Indian, made up a good deal of the staff's work. The final report represents one of the more intensive types of surveys combining a close study of records, testimony, reports and statistics with interviews, conferences and a detailed observation of conditions on the field.

The different surveys and studies described in this chapter all reveal a multiplicity of techniques and illustrate concretely the variety of ways in which a good investigator attacks his problem. It is especially noteworthy that even the smaller studies conducted by an individual worker often combine all the important research techniques.

Chapter VIII

CARRYING FORWARD THE STUDY

Up to this point the discussion has dealt with the importance of working out the main objectives and the general plan for a study and has treated some of the problems involved in obtaining social data by various means. Presumably, you are now in a position to proceed with the fact-gathering. Some of the actual tasks that arise at this point are: devising and testing out the tools to be used; deciding upon the specific areas or units to be studied; and determining the sequences to be followed in carrying on the work.

Devising and Testing Tools

Assume that you have defined precisely what you want your investigation to do and that, in a general way, you know the different things you will do to accomplish your purpose. The next step is to work out precise instruments of inquiry. Interview forms may have to be created; schedules and questionnaires prepared; tests and experiments devised. It may be that the tools you need have already been created by others, but in any case you will want to decide in advance exactly what you intend to do and how you intend to do it.

The creation of even the simplest form is often

troublesome and a matter of inspiration rather than of perspiration. Besides, there is a natural tendency to make schedules more elaborate than is necessary. It is so easy to keep expanding your procedure on the ground that since you are getting or doing one thing you might as well go ahead and add this or that.

The danger is that you will spend considerable time obtaining facts that are of no direct use in your study. It is amazing to find how much information is collected by the average study that is never used. Of course, a certain amount of unutilized material is inevitable, but a real effort should be made to keep the study to the main point. This is one of the reasons that a clearly defined objective is of such supreme importance. Every aspect of the detailed procedure should be submitted to the acid test, "How will this part of the investigation aid and abet the main purpose?"

A concrete illustration of how not to proceed occurred some years ago when a committee of thirty specialists met to devise a schedule for a community survey. To satisfy the various interests represented it became necessary to include an ever growing number of questions until the final schedule consisted of more than 500. As a matter of fact the majority of the answers were never utilized.

In drawing up your forms consider not only how you had best secure your information but the problem of analyzing the materials after they have been gathered. Some types of questionnaire and interview forms lend themselves much better than others to the processes of analysis. The data on many questionnaires cannot be classified or tabulated easily. At times the mere matter

of numbering your items is a distinct aid in the efficient handling of the materials collected. At all events you should consider at this point the way in which the facts collected will be sorted and manipulated.

In statistical studies it is helpful to draw up tabulation forms at the same time that you are preparing your schedules. This process helps to visualize clearly the exact uses to which your facts will be put. Certainly if your investigation is of such a character as to require mechanical systems of tabulation, consult in advance with experts who know about these modern methods of sorting and classification. You can often help the tabulating process by gathering your facts in a particular arrangement.

Many aspects of the instrument-devising stage are, like those of every other period, matters of both imagination and hard work. You cannot create at will a yardstick for measuring attitudes, but if you think long enough and hard enough you may, in the middle of the night, suddenly stumble upon a workable scheme.

After a certain point, armchair planning becomes a waste of time. Nothing succeeds like tested experience. The moral is clear—when you have developed the plan and procedure of a study the next step is to try it out. In no other way can you be sure that your processes will actually work. It is, therefore, of the greatest importance to test a technique before employing it on any large scale.

Testing out the procedure of a study is one of the essential steps in any research project. Almost always it will be found advantageous to select a near-by community or group of individuals as a testing ground.

Do your best with your research tools and see what happens. Do people respond to your inquiries as you imagined they would? Do the questions designed to provide revealing information actually produce results? If not, how should your techniques be modified to secure the information needed?

If there is more than one field worker connected with the inquiry it is desirable for all to work together during the try-out period. This procedure increases the likelihood that all the investigators will attack their problems in the same way.

After the try-out period, re-examine the whole plan of the study. In the light of your actual test, is the original time-schedule workable? Perhaps you will need to cut down the scope of your investigation and to study your cases less intensively or you may decide to study fewer cases. On the other hand, you may want to expand the plan of the entire enterprise. This is the time to consider such matters rather than at the end of the research period.

Sampling

One of the most important decisions in any study is the choice of the cases to be studied. All research requires selection. Most investigators are not in a position to undertake a 100 per cent canvass of anything and even a complete enumeration, such as the Federal Census, is limited by the fact that it can ask relatively few questions.

As a rule, the research worker must rely upon a segment of reality rather than the whole. Fortunately, a sample can be employed to represent adequately a much

larger total. This statement is illustrated concretely by comparing the occupational distribution of all the 29,600 persons in *Who's Who*[1] with figures based upon a sample of the first 9,300 names:

Occupational Group	*Percentage Distribution*	
	Sample A – Fy	*Total A – Zy*
Educators	16.8	17.0
Editors and Authors	12.7	12.8
Bankers and Businessmen	13.2	12.7
Judges and Lawyers	10.8	10.6
Religious Workers	9.6	9.9
Scientists (natural and social)	8.1	8.0
Politicians and Diplomats	6.2	6.4
Doctors and Physicians	6.6	6.2
Actors, Artists, etc.	5.8	5.9
Architects and Engineers	5.8	5.8
Army and Navy Officers	1.9	1.7
Social Workers	1.0	0.9
Agriculturalists	0.8	0.9
Others	0.7	1.2
Total	100.0	100.0

In general both sets of figures tell the same story and it follows that the sample, which took only a third as long to compute as the total, is for most purposes quite as satisfactory as the complete analysis.

The economies of time introduced by the sampling method are of the greatest importance in nearly all research projects. If it were necessary to examine every unit of a given field to produce a reliable study, many

[1] *Who's Who in America* (Chicago; The A. N. Marquis Company, Vol. 16, 1930-31).

aspects of social as well as physical research would be virtually impossible. Fortunately, careful thinking and planning may enable the study of a thousand cases to yield results almost as reliable as returns from a hundred thousand. This statement is not mere rhetoric; it is literally true.

A carefully conducted English experiment showed that reports from only one per cent of approximately 1,250,000 unemployed persons registered at the labor Exchanges actually gave results quite as reliable as a 10 or even a 33 per cent sample. Of course, the one case in a hundred finally studied had to be chosen with the greatest care. Some of the actual problems involved indicate the kind of considerations that must be kept in mind when selecting a representative sample.

It was apparent that if the choice of cases studied was left to the discretion of the different Exchange managers themselves the results would be far from representative since each would naturally select individuals who were approachable. This would lead to an overweighting of applicants who, because of their frequent visits or the complexity of their cases, were personally known to the Exchange staff. To overcome this difficulty it was suggested that the sample be limited to applicants who came to the Exchange at a particular hour, but this plan was abandoned as it was felt that the old-timers would have learned better than the newcomers the time of day when it was most advantageous for them to go to the Exchange.

After much discussion, it was finally agreed that the best procedure was to take every hundredth name in the live files of the Exchange. But even this apparently

simple and automatic arrangement was beset with difficulties. The files of all Exchanges are arranged in the same occupational order beginning with carpenters and continuing in a prescribed sequence. Thus, if managers had been instructed to start with the first case in their files and then pick every hundredth claim, the number of carpenters in the sample would be unduly high since at every Exchange the first individual selected would have been a carpenter. The problem was met by asking each manager to start at a different point in his file, these starting places being selected with the definite purpose of covering as evenly as possible the whole occupational classification.

Other exceptions had to be made to the principles of selection. The information desired was of such a character that it was considered necessary that men be interviewed by the Exchange manager personally and that women applicants be examined by the senior woman officer. In the larger Exchanges this would have meant that the manager and his chief woman assistant would have had to spend much more time interviewing than they could reasonably afford to spare from their current duties. It was decided, therefore, that no manager should be asked to report upon more than thirty applicants.

To make up for lack of complete reports from the larger Exchanges the medium and smaller ones were asked to report upon more than one per cent of their claimants. This procedure meant that the sample included a disproportionately large number of people from the smaller places but probably it did not cause

any serious distortion in results since conditions in small and in large centers were known to be similar.[2]

After the one per cent sample had been completed the results were checked by facts obtained nine and one-half months earlier from a 33 per cent sample covering such items as age, marital status and dependency. In addition, the findings were also compared with a study completed at almost the same time showing the ages of 10 per cent of all claimants. Except where the absolute numbers involved were very small, the correspondence between the three sets of figures was extraordinarily close. In other words, the study based upon one case in a hundred furnished results virtually as reliable as the 33 per cent sample.

This experiment emphasizes a point that is basic to good sampling. It would have been extremely difficult to carry out this type of investigation had there not been available a directory of all the persons concerned. To select intelligently a representative sample you must know the characteristics of the total group you are trying to study.

Many mechanical rules have been formulated for selecting a fair sample. One method is to choose your units at random. In selecting a sample of high school principals you might even put all the names in a hat and then draw out by chance the ones you will actually study. Another method is that employed in the English experiment—take every tenth, twentieth, or hundredth name on your total list. Often it is desirable to employ

[2] Hilton, John, "Enquiry by Sample: An Experiment and its Results," *Journal of the Royal Statistical Society*, Vol. LXXXVII, July, 1924, pp. 544-570.

weighted representation and after breaking up your total into its main constituent elements—male, female, rural, urban, Negro and white—to study a certain number of cases from each sub-group. This was the device actually employed in the *History of Prices during the War*[3] that tried to ascertain price fluctuations from 1913 to 1919. Certain commodities were selected as representative of our fifty-four major industries. Then, to show the general trend in prices during the period, each commodity was weighted by multiplying its average price each month by the amount of the commodity produced and imported in 1917. In this way each commodity was assigned its proportionate representation in the total.[4]

Keep in mind that formal rules cannot replace judgment and experience in the selection and interpretation of a sample.[5] The essential requirement is that the cases studied be representative. This means that the units chosen for separate scrutiny should have in proper proportion all the significant characteristics of the larger group they are intended to represent. It is not enough to investigate many cases; the units must be typical.

Some years ago the Census Bureau found that returns from thirty-eight states indicated a decrease in divorce rates. The Bureau was on the point of issuing a press

[3] War Industries Board, Mitchell, Wesley C., editor-in-chief, *History of Prices during the War* (Washington, D. C.; Government Printing Office, 1919), Bulletin I, pp. 3-10.

[4] Investigators who want to pursue further the problems of sampling are urged to read Mr. R. H. Coats's article, "Enumeration and Sampling in the Field of the Census," *Journal of the American Statistical Association,* September, 1931, p. 270.

[5] Bowley, Arthur L., *An Elementary Manual of Statistics* (London; MacDonald and Evans, 1910), p. 62.

release to this effect when it discovered that complete returns from all forty-eight states gave quite different rates than even so large a sample as thirty-eight states. The reason is simple: divorce rates are one thing if statistics from Reno, Nevada, are included, but quite another if they are omitted.

In conclusion we can only reiterate that the reliability of any study depends largely upon the type of cases selected for intensive investigation. The danger is that unintentionally you will choose a one-sided group. It is so natural to assume that the data you are able to obtain are typical of the total group you want investigated; yet as a matter of fact, the persons who are willing to respond to your inquiries may be very exceptional individuals. You cannot analyze too carefully the units entering into your sample.

Personnel

Thus far, it has been tacitly assumed that you yourself would undertake the direction of the contemplated investigation, but you may want to get someone else to do the work or to assist you. In any case, remember that the personality and experience of the director are probably the most important factors in the conduct of an investigation. A first-rate research worker can often transform even a third-rate topic into a research subject of real importance, while a mediocre investigator can easily kill the value of a most vital subject.

There are many people capable of digging up facts, or as Huxley called it, the hod-carrying of investigation, but hod-carrying alone never produced an imposing edifice.

To a very considerable extent research is an individual matter. It demands investigators who have insight, imagination, honesty, originality and initiative, as well as a thorough knowledge of their subject matter and of ways and means of procedure. And having said this much it is immediately apparent that the qualities of a good research worker—like many other elements in social inquiry—are hard to weigh.

Possibly as revealing a classification as any is one employed by Professor Henry L. Moore, the great mathematical economist, who grouped social investigators into three categories. There is first of all the "magpie" type who is continually running about imitating and appropriating ideas of others. Then there is the "honey bee" worker who labors constantly gathering materials into narrow compartments and who may sting you painfully if you interfere with his activities. Finally there is the rare "pearl oyster" investigator who quietly and unobtrusively gets hold of a grain of truth and then with little or no fuss slowly develops it into a pearl of great value.

Real research is hard work and one can scarcely do his best if he has a number of other exacting jobs he is trying to do at the same time. The experience of the Institute of Social and Religious Research shows that best results are achieved when a research worker can devote himself exclusively to his investigation. Many universities have arrived at the same conclusion. It is becoming customary to release a professor from all academic duties for considerable periods of time to enable him to conduct a social investigation.

One of the fundamental issues in any study is whether

it should be made by "insiders" or by "outsiders." For example, in the investigation of Indian administration the question arose whether years of service in the Indian office should be considered as an asset or a liability in a research worker. In this particular inquiry it was agreed that employment of such a person would be unwise on the ground that if anyone who had been long in the Indian Service came out with findings favorable to the government he might be accused of undue friendliness, and if he made an adverse report he might seem to be activated by personal motives.[6]

In gathering field data there are times when it is a decided advantage to use local investigators to help with the work. Not only can local people frequently be secured at little or no cost but they are almost sure to increase the amount of local interest in your study and can often improve the accuracy of the facts gathered because of their intimate knowledge of conditions. It was found in taking a religious census in a New England community that the people interviewed reported their church affiliations more accurately when talking to a volunteer surveyor, who knew local religious habits intimately, than when dealing with paid workers brought in from the outside.

Local investigators, however, do raise distinct problems. Unless carefully supervised, they tend to produce unsatisfactory results. They should be given short, simple tasks and their results should be checked by experienced investigators.

The employment of local assistants to carry on the

[6] Meriam, Lewis, and Associates, *The Problem of Indian Administration* (Baltimore, The Johns Hopkins Press, 1928), p. 60.

field work of a study brings up another point that can scarcely be stressed too much. You should not sit back in an office while assistants are out doing the spade work of digging up the basic facts. All too often this is what happens. The result is that you lose that intimate contact with reality which is such an important factor when it comes to analyzing and interpreting your findings. Investigations conducted in this way can hardly avoid the charge of superficiality.[7] Actual first-hand observations and study afford a grasp and insight into a subject that no amount of reading or swivel-chair thinking can replace.

Planning the Sequence

The sequence in which the various phases of a research project are taken up and carried forward is a matter worthy of careful consideration. One danger is that you will start too many things at once. The ideal arrangement is so to plan the data gathering that if, for any reason, it is necessary to halt the process, nevertheless the materials that have been assembled will be of value. This principle is important because of the tendency to attempt more than is possible with the time and money at your disposal.

In deciding upon the procedure to be followed, remember that certain jobs can be carried forward more advantageously at one time than at another. In many areas, rural surveys cannot be undertaken in the winter-time because roads are impassable, while most realistic

[7] Allen, E. W., "The Nature and Function of Research," *Proceedings of the American Sociological Society*, Vol. XXI, 1926, p. 239.

school surveys obviously cannot be conducted during the summer vacation period.

A little thought and ingenuity can usually save much valuable time. Some years ago the Institute of Social and Religious Research embarked upon field studies of approximately 140 villages.[8] Instead of waiting until all the facts about these places had been gathered before analyzing the data, it was decided to stop the fact-gathering process late in the fall after all the villages in one geographic division had been visited. This fraction of the total body of data was then treated as though it were all the information to be assembled. The arrangement had certain decided advantages: it saved the delays involved in trying to survey rural areas during the period of winter storms; the initial experiments with methods of tabulation and analysis were limited to a comparatively small group of cases that could be handled far more easily than the entire number; it was possible to see just how the facts gathered were going to be actually utilized in the later stages of the study and this led to certain valuable suggestions for changes in the basic plan for surveying the villages in other areas.[9]

In planning the procedures of a study it is desirable to consider the use of commercial agencies to take over various phases of the investigation. In nearly all large cities there are business concerns which for a fee handle such jobs as sending out form letters, making charts, doing statistical tabulations, etc. It is frequently advan-

[8] Brunner, Edmund deS., *Village Communities* (New York; Doubleday, Doran & Company, Inc., 1927).

[9] Cf. also Chapter XI below for discussion of Professor Bronislaw Malinowski's use of the same method.

tageous to employ such agencies both because they are in a better position than the investigator to undertake these tasks economically and also because the turning over of routine functions entirely to others leaves the investigator additional time for the more creative aspects of his work.

During a study of housing conditions in cities, the chief investigator arranged with a statistical agency to tabulate his findings as soon as the process of data gathering had been completed in any one place. This saved valuable time since it allowed the process of field work and tabulation to go on simultaneously.

In connection with almost any project there is the danger that bodies of material will be lost through carelessness, theft, fire or other causes. You will recall that Colonel T. E. Lawrence either lost or had stolen the only copy of his first manuscript dealing with his Arabian adventures. Every precaution should be taken to avoid or at least to minimize the effect of such calamities. Valuable materials should be obtained in duplicate and copies filed in separate places. Important documents should be sent by registered mail or by insured express. Sometimes it is worth-while to have the replacement value of materials covered by an insurance policy. The Institute of Social and Religious Research has had occasion not only to insure the active files of certain studies but also the records being carried in the brief cases of field workers.

An important phase of many studies is to prepare people for your coming. In community surveys this usually means newspaper publicity, while in other types of inquiries the same objective may be accomplished

by personal correspondence. At any rate it is a great help if key people know in advance what you are trying to do, and it is obviously desirable that they be given an accurate rather than a garbled statement of your purposes. This means that you had better take the initiative in formulating such a statement rather than leaving the matter to chance.[10]

In the study of an industrial community a research worker was asked in no uncertain terms to leave town because local leaders had not been told about the aims of the study and feared the investigator "would stir up trouble." It took several long distance telephone calls on the part of a friend, who was well-known in the community, to clear up the misunderstanding.

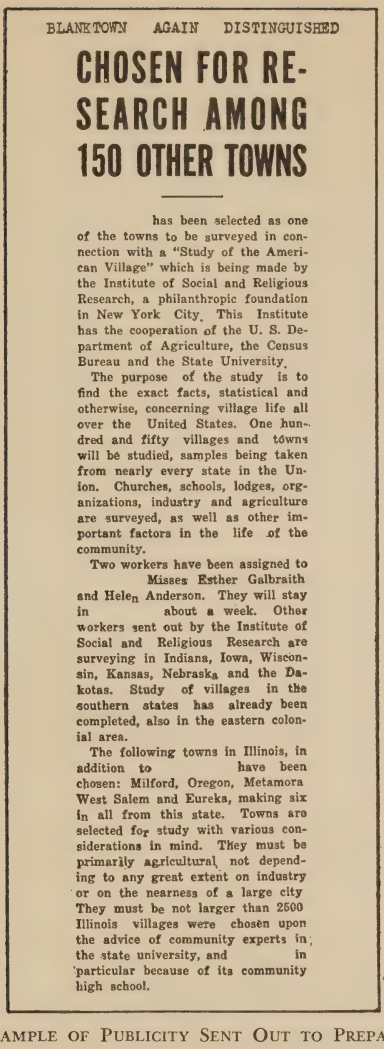
Carefully planned newspaper publicity will usually assist a study and well chosen letters of introduction are almost always an advantage. If people understand the main objective of your enterprise and have confidence in your ability and integrity, you can often save a lot of needless delay in actually getting a study started.

Frequently it is not easy to get across to others the *raison d'être* of impartial fact finding. The attitude of a certain Mohammedan gentleman toward such data gathering is illustrated by the following letter written in response to a request for information about his community.

"My illustrious Friend and Joy of my Liver:

The thing which you ask of me is both difficult and useless. Although I have passed all my days in this place, I have neither counted the

[10] Brunner, Edmund deS., *Surveying Your Community* (New York; Doubleday, Doran & Company, Inc., 1925), p. 26.



BLANKTOWN AGAIN DISTINGUISHED

CHOSEN FOR RESEARCH AMONG 150 OTHER TOWNS

has been selected as one of the towns to be surveyed in connection with a "Study of the American Village" which is being made by the Institute of Social and Religious Research, a philanthropic foundation in New York City. This Institute has the cooperation of the U. S. Department of Agriculture, the Census Bureau and the State University.

The purpose of the study is to find the exact facts, statistical and otherwise, concerning village life all over the United States. One hundred and fifty villages and towns will be studied, samples being taken from nearly every state in the Union. Churches, schools, lodges, organizations, industry and agriculture are surveyed, as well as other important factors in the life of the community.

Two workers have been assigned to Misses Esther Galbraith and Helen Anderson. They will stay in about a week. Other workers sent out by the Institute of Social and Religious Research are surveying in Indiana, Iowa, Wisconsin, Kansas, Nebraska and the Dakotas. Study of villages in the southern states has already been completed, also in the eastern colonial area.

The following towns in Illinois, in addition to have been chosen: Milford, Oregon, Metamora West Salem and Eureka, making six in all from this state. Towns are selected for study with various considerations in mind. They must be primarily agricultural, not depending to any great extent on industry or on the nearness of a large city They must be not larger than 2500 Illinois villages were chosen upon the advice of community experts in the state university, and in particular because of its community high school.

Exhibit 13. EXAMPLE OF PUBLICITY SENT OUT TO PREPARE COMMUNITY FOR VISIT OF SURVEY WORKERS

houses nor inquired into the number of the inhabitants; and as to what one person loads on his mules and the other stows away in the bottom of his ship, that is no business of mine. But above all, as to the previous history of this city, God only knows the amount of dirt and confusion that the infidels may have eaten before the coming of the sword of Islam. It were unprofitable for us to inquire into it. . . . Listen, O my son! There is no wisdom equal to the belief in God! . . . Thou art learned in the things I care not for, and as for that which thou hast seen, I spit upon it. Will much knowledge create thee a double belly, or wilt thou seek paradise with thine eyes?

The meek in spirit,

IMAUN ALI ZADI"[11]

Other problems, "short-cuts" and safety devices might be mentioned, but after all no amount of description can hope to cover all the practical issues that arise in the conduct of even an elementary study. The main point to remember is that you can avoid many a headache by carefully planning your procedures and testing them out in advance.

[11] Quoted by Thomas, William I., *Source Book for Social Origins* (Boston; Richard G. Badger, 1909), p. 170.

Chapter IX

QUALITATIVE ANALYSIS

Having assembled research materials, you are only well started on your study. The tasks of fact-gathering, whether in a library or "on the field," are usually so engrossing that you may feel the big job is finished after the primary data have been collected. Nothing is further from the truth. There still remain the all-important stages of analyzing the materials and writing and disseminating the report. These processes are almost invariably more time-consuming than even the experienced research worker is likely to visualize in advance.

Naturally the difficulties of analysis will vary with the nature of the investigation. It is easier to show the correlation between a number of statistical series than to digest the vast bodies of information collected by a modern community survey. But in either case, as much time may be required to analyze the data as to gather materials in the first place.

Creative Aspect of Analysis

The analysis of any body of information requires much more than a mere transcript of facts. The piling up of large bodies of information on any subject is collecting—not research. The purpose of any worthwhile

study is to gain increased insight into a particular problem, and facts as such may not be illuminating. Indeed, great masses of unassimilated information may hinder rather than help the understanding.[1]

The problem confronting the research worker during the period of analysis is to construct out of the bricks and mortar of his facts an intellectual edifice that will put the materials in their proper setting. To repeat the famous dictum of M. Henri Poincaré, "Science is built with facts as a house is built with stones, but a collection of facts is no more science than a heap of stones is a house."

Any creative piece of social research is to a considerable extent a product of the mind, the lines and plans of which will vary with the personality, insight and genius of the investigator. Long before 1859, investigators had painstakingly collected and classified huge bodies of information about fossils, plants and animals, but it took Charles Darwin to see that the generalization known as the theory of evolution flowed naturally from these dry accumulations of facts.

An essential requirement of the analysis period is to cultivate what Professor Karl Pearson has called a "disciplined imagination," that devotes itself not to the creation of air castles but to the construction of intellectual edifices built on actual facts.

The imagination of a competent investigator must be realistic and critical. Michael Faraday, the great English chemist and physicist, testified that the vast majority

[1] Beveridge, Sir William, "International Cooperation in Social Science" in *The New Social Science*, edited by Leonard D. White (Chicago; The University of Chicago Press, 1930), p. 47.

of thoughts passing through his mind had to be crushed in silence and secrecy. Not more than a tenth of them lived through the ordeal of his own criticism.[2]

Analyzing data is the most difficult and personal part of any study. It is at this point that your prejudices and biases can so subtly and unconsciously enter to distort and invalidate the whole study.

The problems of analysis are so inextricably interwoven with the personality of the inquirer that many aspects of the interpretative process are not communicable. The ability to analyze social situations is in part a gift but even genius can profit by the appreciation of certain obvious pitfalls.

All valid analysis demands common sense and an ability to think straight. No amount of technical skill can take the place of these fundamental requirements. The principles of clear thinking are set forth in standard works on logic. Our aim is to show how some of these rules apply to the analysis of social problems.

Basic Assumptions

A fundamental consideration is that all interpretations of facts rest upon certain assumptions. Indeed, the chief criticism leveled at most social investigations has to do with the presuppositions of the investigator. You will want to become aware of the ones employed in your study. This is far from easy.

Social inquiry is so interwoven with the warp and woof of life that the very terms and the grounding of your questions are likely to be influenced greatly by

[2] Pearson, Karl, *The Grammar of Science* (London; Adam and Charles Black, 1911), p. 32.

your particular outlook. As Karl Marx, among others, has so clearly demonstrated, the most abstract and academic reasoning may be the result of a particular social setting. A good way to become aware of such distortions is to study inquiries of an earlier epoch. Then it is comparatively easy to see that the investigator assumed as self-evident propositions that are laughable today.

The Wealth of Nations by Adam Smith considered as permanent a type of political economy that has long since passed away. It is so easy to take for granted that your own personal experiences are the "experience of history." Certainly the vaunted objectivity of many investigators will, centuries hence, be looked upon not as freedom from, but unconsciousness of, the preconceived notions which have governed them.[3]

The basic assumptions from which you view social facts are complicated by the diversity of social aims. If you want to make a study of the efficiency of a locomotive, the problem is fairly simple because most people will agree upon the standards for judging efficiency. But such acceptable criteria are not equally available when dealing with social phenomena. On what basis should you analyze the work of a school, a church or a labor union? Even experts in these fields disagree as to the *raison d'être* of these organizations. Indeed, differences of opinion over aims and methods are the very elements that divide society into sects and parties.[4]

There are no sure-fire correctives for what Francis

[3] Merz, John T., *A History of European Thought in the Nineteenth Century* (London; Wm. Blackwood & Sons, 1896), Vol. I, p. 7.

[4] Cf. Lippmann, Walter, "Flight from Reality" (Editorial), *New York Herald Tribune,* May 3, 1932.

Bacon called the "idols of the cave"—errors inherent in our individual constitutions, our private and particular prejudices and our own limited experience. However, self-criticism and a keen awareness of the problem can go a long way toward eliminating unwarranted preconceptions. A social investigator should recognize the subjective character of his assumptions and should make their arbitrary character clear to himself and to his reader.

Critical Evaluation of Data

Turning now to essential steps in analysis, one cannot do better than re-emphasize the need for keen criticism. It is unsafe to accept at face value the information collected by any study.

A basic task is to evaluate critically the materials collected. Many studies prove virtually worthless because the investigator failed to appreciate the limitations of his data. A report put out in 1905 by the State of Massachusetts came to the surprising conclusion that American married women had less than half as many children as had their mothers. This startling statement was based upon the returns from married women who were asked to report both the number of their children and those borne to their mothers. Apparently the investigators did not appreciate that many of the women who reported had not completed their child-bearing period, while virtually all of their mothers had done so. A little intelligent criticism would have avoided this error.[5]

There is a natural tendency to assume that your find-

[5] Chaddock, Robert E., *Principles and Methods of Statistics* (New York; Houghton Mifflin Company, 1925), p. 13.

ings prove more than they really do. All facts are not equally reliable. The materials that are basic to your analysis should be tested and re-tested to make sure that they are strong enough to stand the strain you are putting on them.

Emile Durkheim in *The Elementary Forms of the Religious Life* made an intensive study of religion among the primitive Australians and then generalized his findings to cover religious life all over the world. In most cases such stretching of materials is unconscious but Durkheim, at least, was aware of what he was doing. Toward the end of his study he states that no single religion, whatever its field of extension, can form an adequate basis for such an induction, but on the other hand, when a law has been proved by one well-made experiment, the proof is valid universally.[6] Subsequent research has not shown that Durkheim was correct in his contention.

Often, an investigator will begin by recognizing the inadequacy of his materials but will immediately forget his caution and proceed to use them as though they were entirely reliable.

It should be recognized that even perfectly *bona fide* data may be used to create a totally erroneous impression. You probably have heard the story of the jealous ship's mate who took advantage of a day's illness on the part of his abstemious captain to write in the ship's log: "Captain sober today." This statement was accurate but totally misleading.

[6] Durkheim, Emile, *The Elementary Forms of the Religious Life,* translated from the French by Joseph Ward Swain (London; George Allen and Unwin, Ltd., 1915), p. 415.

A similar instance was that of an Oriental student who returned to his native land with the report that Americans were dirty, lazy and superstitious. They were dirty because they wore their shoes in the house; they were lazy because they agitated for an eight-hour working day and they were superstitious because they had so many churches. How can anyone refute such convincing evidence?

The chief quarrel of Hindu leaders with Katherine Mayo's *Mother India* is with the information she omitted. They challenge not so much the data presented as those left unconsidered. The investigator should realize the great danger that during the analysis period his personal biases and prejudices and his "choice" of evidence may discolor even perfectly reliable facts.

Classification

A basic requirement of analysis is classification. Indeed, science has been called classified knowledge. Any property of an object might be taken as a basis for classification: one might group books on the basis of the number of their pages, but obviously such a scheme would have no value to man or beast. The aim should be to form objects into groups that have essential elements in common. Frequently it will be found that seemingly unimportant factors are, in reality, the most fundamental.[7]

To a large extent classification, like every other aspect of a study, depends upon purpose. An illustration of the truth of this assertion is to be found in Dr. Kyung

[7] Westaway, Frederick W., *Scientific Method* (London; Blackie & Son, 1919), pp. 215-216.

Durk Har's *Social Laws*. The aim of that work was to discover whether there are any valid scientific laws in social phenomena to justify the claim of the various humanities to the title of positive sciences. For this purpose the author collected 136 social laws and in addition thirty-two other propositions. After gathering these laws, the question arose: how should they be classified?

The answer, as Dr. Har states, depends upon one's purpose in collecting them. If you want to write a history of social laws, it might be best to classify them in the chronological order of their appearance; or if your purpose is to make a catalogue of social laws, it would seem most appropriate to group them by various types of subject matter—law, economics, history and government. But if your purpose is to find out whether so-called social laws are scientifically valid, then you had best group them from the methodological point of view.[8]

Detailed knowledge of your subject and a clearly defined purpose are fundamental to any adequate scheme of classification.

Other Steps in Interpretation

After data have been classified they must be interpreted further. It is not enough to present a body of carefully pigeon-holed information; the facts must be weighed. Professor Harold J. Laski has put the problem concretely in the following illustration:

> "In the social sciences every investigator has two great problems. He has first of all to find the facts,

[8] Har, Kyung Durk, *Social Laws* (Chapel Hill, N. C.; University of North Carolina Press, 1930), pp. 5-6.

and second, he has to assign a scheme of values to them. They are not, as William James said, born free and equal. They have to be weighed. They have to be given a significance most of which depends upon the personal philosophy of the individual investigator. If, for instance, I tabulate the membership of the English Cabinet since 1801, and discover that some 60 per cent. were born of immediately aristocratic parentage, I have merely provided a basis for interpretations of the most diverse kinds. I may take the results to mean the fine determination of the English peerage to devote itself to public service; I may take it to measure the differential advantages an English aristocrat possesses when he embarks upon a political career; or I may take it as a criterion of the degree to which the English social system puts barriers in the way of the common man who desires to distinguish himself in political life."[9]

You should strive to appreciate the different implications that can flow from your data.

In social analysis there is always the danger that you will attribute to one factor in the problem results that are in reality owing to a number of factors working in combination. This, for example, is the fallacy behind the so-called "economic interpretation of history." There is no doubt that economic conditions, particularly in our modern age, are extremely powerful social determinants, but to claim that economic conditions are *the* cause which brings about all other social situations

[9] Laski, Harold J., "Foundations, Universities and Research," *Harper's Monthly Magazine,* Vol. 157, August, 1928, pp. 296-297.

is to fail to appreciate the extent to which economic conditions are themselves influenced by non-economic factors.

Sociological literature is full of one-track explanations most of which are wrong. Some years ago the annual report of a Western college presented information purporting to show that smoking was the cause of failure among students. When students were classified into three groups the non-smokers showed a far smaller proportion of failures than the moderate smokers, and those in turn than the excessive ones. This evidence indicates that smoking is a factor in failure but it does not necessarily follow that smoking is *the* cause of failure. Yet such unwarranted generalizations are constantly being made.[10]

The way in which an author will sometimes run into the ground a particular explanation of society is illustrated by the amusing case of a German student, who, years ago when it was the custom to explain everything on the basis of the survival of the fittest, tried to account for the thick skulls of Australians on the assumption that the men treated the women with such violence that only thick-headed women were left to reproduce.[11]

The human mind seizes upon one-track explanations because they eliminate the mental ditch-digging of critically examining each separate situation on its merits. It is so easy to assume that one thing is the cause of another; yet such simplified explanations are almost sure to be wrong.

[10] Chaddock, Robert E., *op. cit.*, p. 17.

[11] Thomas, William I., *Source Book for Social Origins* (Boston; Richard G. Badger, 1909), pp. 22-23.

An excellent illustration of the best type of qualitative interpretations occurs in the studies of Max Weber dealing with the rise of Protestantism and of capitalism. His main thesis is that Calvinism, and more especially English Puritanism, played a major rôle in creating moral and political conditions favorable to the growth of the capitalist system.[12]

Weber recognized that the rise of Protestantism was not *the* cause of the growth of capitalism. Nevertheless, the question arises whether even he did not oversimplify his problem. Both "Protestant ethics" and the "capitalist spirit" seem to be more complex than he implies. Certainly it is significant, as Professor Robert M. MacIver has pointed out, that capitalism reached Japan without any comparable religious revolution.[13]

Most social situations are the result of a whole battery of causes working in combination and there is no ready-to-hand formula for determining the part played by each.

Creating Standards and Criteria

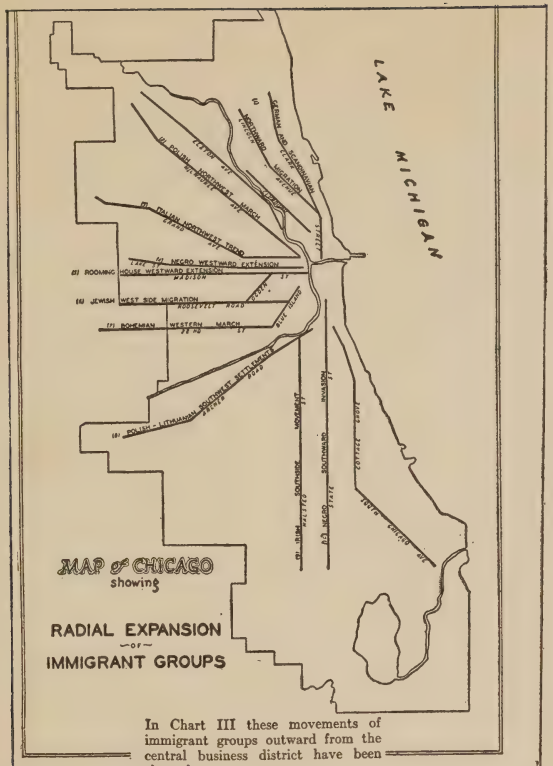
The process of classification and interpretation frequently involves the creation of criteria and standards for analyzing your facts. A simple illustration of the problem occurred when Professor James McKeen Cattell wanted to grade "men of science." How should he proceed to rate scholars? The plan finally adopted was

[12] Weber, Max, "Die Protestantische Ethik und der Geist des Kapitalismus," first published in the *Archiv für Sozialwissenschaft und Sozialpolitik,* Vols. XX and XXI, and later printed in *Gesammelte Aufsätze zur Religionsoziologie* (Tubigen, J. C. B. Mohr, 1920), Vol. I.

[13] MacIver, Robert M., *Society: Its Structure and Changes* (New York; Ray Long and Richard Smith, Inc., 1931), p. 522.

CHART I—URBAN ZONES IN THE GROWTH OF THE CITY
(According to the principle of radial expansion)

Exhibit 14. The Principle of Radial Expansion showing the Urban Zones in the City of Chicago, frame of reference used in the studies of the "Chicago School." (Reprinted from Dr. E. W. Burgess in *Annals of the American Academy of Political and Social Science,* November, 1928.)



In Chart III these movements of immigrant groups outward from the central business district have been charted.

On the North Side the main line of (1) northward invasion has been along Clark Street, a highway traversed first by Germans and Scandinavians with Hungarians and Italians at a respectable distance behind. On the West Side are six great highways: (2) the northwest march of the Poles along Milwaukee Avenue, crowding fast behind an earlier German and Scandinavian movement; (3) the outward Italian expansion following the winding of Grand Avenue even outside the city limits into Maywood; (4) the westward penetration of the Negroes following Lake Street; (5) the extension of the cosmopolitan rooming house district westward on West Madison Street, the "main stem" of Hobohemia; (6) the migration of the Russian Jews along Roosevelt Road; and (7) the Czech journey from Pilsen through South Lawndale to Cicero and Berwyn along 22nd Street. On the South Side the three main radial lines are: (8) the Polish settlements southwest following Archer Road; (9) the Irish southern movement down Halsted Street and (10) the Negro invasion of the South Side along State Street.

Exhibit 15. THE CONCEPT OF RADIAL EXPANSION
(Reprinted from Dr. E. W. Burgess in *Annals of the American Academy of Political and Social Science,* November, 1928, pp. 109-110.)

to get hundreds of leading scientists in a dozen fields of knowledge to rank their colleagues in an order of merit. These ratings were then combined into a master list through a process of interpolation.[14] Here, then, is a method resting primarily upon the combined judgments of nearly a thousand judges.

Allied with the creation of norms and standards is the matter of devising what has been called a "frame of reference." Such a scheme is found in the rural studies of Dr. Charles J. Galpin, who came to regard a rural community as a village center radiating its influence into the surrounding agricultural areas that it served. The development of such a concept or "frame of reference" is not a mechanical or automatic process but is rather a combination of intimate knowledge, long brooding and inspiration.[15]

It should be especially noted that a "frame of reference" is a generalized version of reality. The idea that the different zones of a city can be viewed as a series of concentric circles is never actually realized in any particular metropolis; nevertheless, the concept is valuable for purposes of analysis.

Most of the first-rate sociological investigations owe their claim to importance not primarily to the facts collected but to the angle from which the facts are viewed.

In his *Folkways*, William Graham Sumner did not merely present a description of social customs through-

[14] Cattell, James McKeen, *American Men of Science* (Garrison, N. Y.; The Science Press, 1921), Preface, pp. v, viii.

[15] Galpin, Charles J., "The Social Anatomy of an Agricultural Community," Madison, Wisconsin, Wisconsin Agricultural Experiment Station, *Research Bulletin 34*, May, 1915.

out the world, but built up a "frame of reference" from which he looked at them. He proceeded on the assumption that folkways are a societal force by which men try to satisfy needs, each act standing by itself and looking no farther than the immediate satisfaction. From this it results that all life of human beings, in all ages and stages of culture, is primarily controlled by a vast mass of folkways handed down from the earliest existence of the race, only the topmost layers of which are subject to change and control.

The most uncivilized men, both in their quest for food and in their wars, do things which are painful but which they find to be expedient. Sumner contended that these cases teach the sense of social welfare better than pleasurable experiences and that when the concept of welfare is added to folkways, they become "mores" and, by virtue of the philosophical and ethical elements added to them, win peculiar social utility and importance.[16] Such insight involves much more than the mere gathering and pigeon-holing of information.

In many instances, the development of a "frame of reference" is the most creative aspect of a study; at this point genius has free scope to display itself.

Social Laws

The fundamental difficulties connected with problems of social analysis bring us to the question of social "laws." It is often taken for granted that the ultimate purpose of social research is to arrive at generalizations

[16] Sumner, William Graham, *Folkways: A Study of the Sociological Importance of Usages, Manners, Customs, Mores and Morals* (Boston; Ginn & Company, 1906), pp. 3-4.

or laws.[17] In reality many types of research are merely attempts to get specific answers to specific questions—not to arrive at rules or generalizations.

Some years ago, Mr. Henry Ford decided, because of tariff difficulties, to establish separate factories abroad for the manufacture of automobiles, and wanted to maintain his well-known "American scale" of living among the workers employed in Europe. But all sorts of difficulties, in addition to the mere mechanics of exchange, interfered with paying foreign workers the same rate he had instituted in America. As a result the Ford Motor Company asked the International Labour Office at Geneva to undertake a study of relative costs of living in certain European cities in which the Ford Company had established or proposed to establish factories. With this comparative living scale information in hand, it was felt the company would be able to arrive at a fair scale of wages.

The research problem was complicated because it involved not a direct comparison of real wages in the various cities, but rather how much a foreigner would have to spend in order that his standard of living might be equivalent to that of a similarly situated employee in Detroit. The hypothetical European must be able to obtain the same amount of "satisfaction" although it might be from different expenditures or from different distribution of expenditures—evidently a complicated problem that involved specific answers to specific questions, rather than "laws" or "generalizations."[18]

[17] Lundberg, George A., *Social Research* (New York; Longmans, Green & Company, 1929), p. 5.

[18] "Studies and Reports," Series N, No. 17 of *International Labour Office*: "An International Enquiry into Costs of Living," 1931.

In social research rigid laws are seldom possible because societal data, unlike physical phenomena, depend not merely upon objective measurable factors but also upon subjective attitudes. Suppose two sons both live under the influence of a tyrannical father; one submits to his arbitrary rule while the other revolts. To explain the completely different reactions of these two boys, you must know all about their characters and temperaments. Certainly the arbitrary action of the father cannot be assumed to be *the* cause of submission in one case and of revolt in the other. In many types of social research one must consider not merely the external objective phenomena that operate in a given situation but, in addition, the subjective attitudes and beliefs of the people themselves and the reactions set up between these two sets of factors. This fact alone makes it virtually impossible to arrive at social laws that have the same precision and validity as the laws of physics and chemistry.

Chapter X

QUANTITATIVE ANALYSIS

Most social studies, especially in America, involve the use of statistics. Speaking broadly, the large number of complicated statistical tools that have been invented during recent decades have their origin either in the fact that our minds cannot easily grasp many different relationships or that men cannot be experimented with like guinea-pigs. Few social situations can be repeated under controlled conditions. Therefore, research workers have turned to the actual situation in the world around them and have tried to isolate by statistical techniques the influence of certain social factors.

For example, some years ago Professor William F. Ogburn wanted to find out whether the women who had but recently been enfranchised in the State of Washington voted "conservatively" or "radically." But the election returns could not be used directly to settle this matter because the vote of each man and of each woman was not separately recorded. However, the total number of men and of women that had voted in each district was known. These data were sufficient with the aid of statistical techniques to enable Dr. Ogburn to handle his problem.

He began by selecting two groups of election issues that had afforded the opportunity for conservative or

radical tendencies of the voters to display themselves. One group concerned itself with matters that had been voted upon before women were given the vote, while a second dealt with issues that women as well as men had helped to settle at the polls. By means of statistical techniques variations from district to district in the relative number of women that voted in the second group of elections were taken into account and these adjusted figures were then correlated with the results of the elections when only men voted. Thus, a result was obtained comparable to that which would have resulted had Dr. Ogburn had sufficient control over the actual conduct of the elections to compel the votes of women and of men to be recorded separately.[1] Here is a concrete illustration of how statistics can be used as a substitute for experimentation.

Critical Examination of Data

If your investigation has brought together original bodies of data that you need to handle statistically, how should you treat them? Suppose that you have collected a large number of schedules containing items to be studied quantitatively. The first step is to examine your replies critically. Of course, you will already have done a certain amount of this type of work at each stage of your study, especially when testing out your research tools, but now that all returns have been collected you will need to complete the process. Let us assume that

[1] Ogburn, William F., and Goltra, Inez, "How Women Vote," *Political Science Quarterly*, Vol. XXXIV, No. 3, September, 1919, pp. 413-433.

your earlier criticisms have eliminated all worthless bodies of information. Nevertheless, a searching examination of the facts collected is an aid in interpreting your results intelligently.

Not long ago Professor Mark A. May had occasion to examine critically the returns from 6,000 of the tens of thousands of Protestant ministers who gave educational information about themselves in connection with the 1926 Federal *Census of Religious Bodies*. The actual schedule sent out by the government asked, "If pastor is a graduate of a college or theological seminary, give name of institution below." The original returns from the 6,000 pastors studied showed that 2,398 or virtually two-fifths classed themselves as seminary graduates, but according to Professor May's special analysis this figure over-estimated decidedly the number who were graduates of a "recognized" institution. He found that only 1,776 mentioned one of the several hundred seminaries recognized by the U. S. Bureau of Education, while 406 named Bible schools or other institutions not on the government's list and 216 failed to give the name of any school, merely asserting that they were graduates. Thus Dr. May came to the conclusion that if by seminary graduates one means at least high school graduation plus successful completion of three years of seminary study, then it is certain that the Census results greatly exaggerated the proportion of seminary graduates.[2] Such criticism is essential in order that you may intelligently interpret your findings.

[2] May, Mark A., *The Profession of the Ministry* (New York; Institute of Social and Religious Research, in press).

Editing and Classifying Returns

In addition to critically examining your figures, how should you proceed to tabulate them? Usually you will need to edit your data for errors and inconsistencies. Occasionally the missing information can be derived from other replies on the same schedule. If not, it may be necessary to secure these items by correspondence. Some figures may not be available under any circumstances and you may therefore decide to throw out such cases. On the other hand, it may be desirable, in order to account for all your replies, to put them in an "unknown" or "all other" class.

As a rule it is never safe to assume that a series of sub-totals on a schedule have been added correctly. Such additions should be checked but care should be taken to keep intact the original form of the schedule. One is scarcely ever justified in erasing a reply, and corrections and revisions should be made with a distinctive ink.

But suppose an American child of fourteen years is reported as a widow, what should you do? Everyone knows that there are child widows in the world but is it not more reasonable to suppose that this is an error in recording or an exceptional case? You may decide to eliminate this return entirely but you would not be justified in arbitrarily correcting the reply unless you have evidence, not only that the answer is wrong, but what the correct answer really is.

The process of editing may also include classification. The Federal Census, for instance, asks each person two questions about his occupation: one inquires

into "the trade, profession or particular kind of work done" and the other into "the industry, business or establishment in which at work." On the basis of these queries trained clerks place each gainfully employed worker over ten years of age in one of hundreds of classes. This work is not left to the individual enumerator because at best the borderline between occupations is not clear. It has, therefore, been found desirable to assign the process of classification to specialists.

As was brought out in the previous chapter, the scheme of classification is a fundamental consideration in any study. Unclassified facts are hard, if not impossible, to grasp. Thus any considerable number of separate items must be grouped in order to appreciate their significance.

Faulty Classification

The exact classes to be employed in any scheme of tabulation are a matter for careful thought. Too often the arrangement adopted is faulty. An illustration of defective classification can be found in certain studies dealing with the effects of alcohol upon the human system. The records of insurance companies are cited to show that the use of alcoholic beverages, no matter what their kind or amount, tends to shorten the span of life. This evidence, however, cannot be accepted as conclusive because these records do not distinguish between moderate and heavy drinkers. Everyone agrees that excessive drinking reduces the expectation of life, but what about moderate drinking? Special studies by Dr. Raymond Pearl show that in comparison with total abstaining moderate drinking did not lower the life

expectancy of people who were thirty years of age and over and that for persons over forty-five the expectation was distinctly higher for moderate drinkers than for teetotalers. Thus the insurance companies' figures showing that abstainers live longer than individuals who drink may actually conceal the fact that among elderly people, at least, moderate drinking is somewhat of an aid to longevity.[3]

At the outset your scheme of classification had better be too detailed rather than not detailed enough. After classifying your data it is comparatively easy to combine separate groups into large units while it is impossible to break them down into sub-classifications without undertaking new tabulations. Thus if you happen to be grouping school children by ages and are uncertain about the best class intervals to employ, a way out of your difficulty might be to tabulate each child by his or her year of age. This detailed method of treatment would enable you later to combine results on any age-grouping that your findings showed to be significant.

When working out a scheme of classification one problem is to decide what you will do with your "marginal" and exceptional cases. Supposing you are grouping people by types of occupations. What should you do with a circus owner? Where will you pigeon-hole prize-fighters and baseball players? Should a trained nurse be put in the category of professional service along with college presidents and judges? These questions are important because the inclusion or exclusion

[3] Pearl, Raymond, "Alcohol" in *Encyclopædia of the Social Sciences*, Vol. I (New York; The Macmillan Company, 1930), p. 622.

of such individuals may distinctly modify the conclusions reached.

In 1923 Mr. Carl Hookstadt made a reclassification of the United States Census of Occupations and found about 3,000,000 more persons in the employee class than were shown by the government, largely because he broke down the census class "Professional Service" and threw the bulk of these persons into the employee class. The difference was merely one of definition.[4]

Mechanical Tabulation

Having determined your scheme of classification, the job next confronts you of "taking off" the items from your schedules and throwing them into their proper classes. This process is often laborious and costly. Even the statistical handling of a few hundred questionnaires may be forbiddingly time-consuming. Some years ago a student without financial backing decided to embark upon the task of tabulating by hand a large number of returns collected by the federal government. As a result he expended so much energy upon the mere process of sorting that he was intellectually "hanging on the ropes" by the time he reached the stage where his findings were sufficiently organized to allow him to understand them.

Luckily for quantitative research our mechanical age has invented automatic systems of tabulation. Electrically driven machines are available that will count at incredible speed. Before the system can be employed, however, a number of preliminary steps are essential.

[4] Wolman, Leo, *Growth of American Trade Unions, 1880-1923* (New York; National Bureau of Economic Research, 1924), p. 79.

All the data not already in numerical form must be given code numbers. This coded information and the

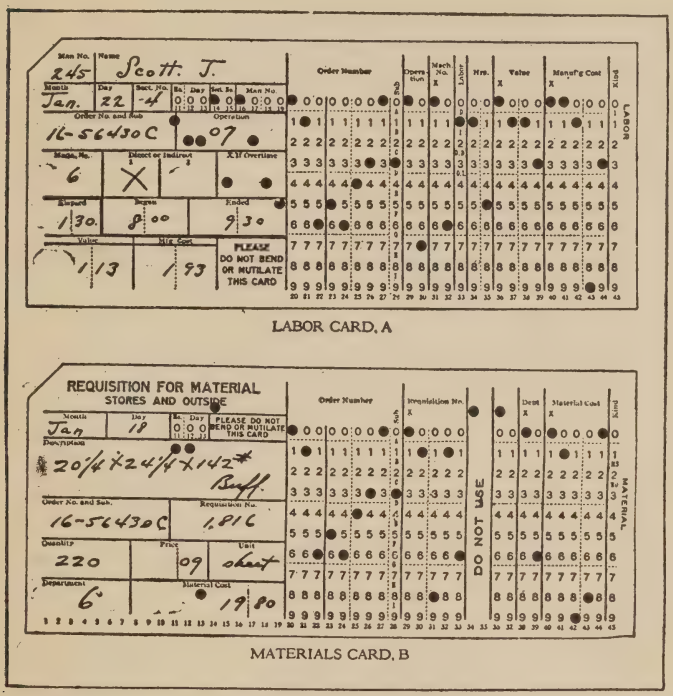


Exhibit 16. Example of the use of punch cards for tabulating, thus saving considerable manual labor for the individual worker. These cards are used for accounting purposes, card A for labor costs, card B for materials. The data are first recorded in ink and then the same card is "punched," thus allowing the cards to be sorted on automatic tabulating machines. Many types of social information can be tabulated in the same way.

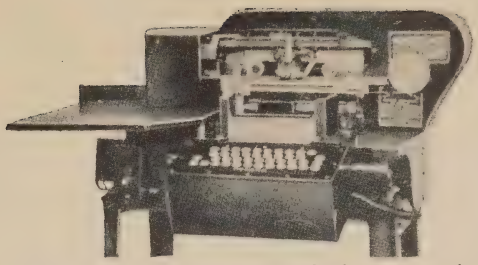
numerical facts must then be transferred to "punch cards" which consist of regular strips of thin cardboard

divided into columns of small squares. Each square may represent a number or an item. Thus a hole punched in the top square of the first column can be made to stand for a person born in the United States; the space on the second row of the same column might represent a Canadian, and so on.

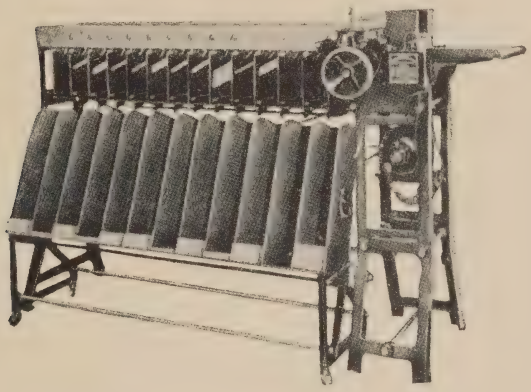
The coded information is transferred to the punch cards by means of holes made with a device known as a "key punch." These cards, after they have been punched, should be verified to make sure that the information has been correctly transcribed. The verified cards can then be run through the sorting and counting machines at the rate of several hundred per minute.

In the larger statistical studies machine tabulation is indispensable. The Federal *Census of Population* could be carried forward in almost no other way. Many research projects will find machine tabulation a great economy of time and effort. Not the least of its advantages is that after the cards have once been punched they can be used many times rapidly to sort and "cross-tabulate" your information in a variety of ways.

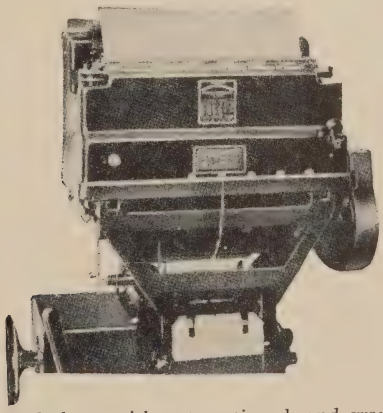
If your study involves a great deal of tabulation and sorting you should certainly become acquainted with the limitations and possibilities of electrical sorting devices. Indeed, if machine tabulation is contemplated the basic schedule should be planned in a special way from the start. In certain instances it has been possible by "punching" the original schedule to use it as the "punch card." Of course, this means that the schedule itself must be printed on a certain size and weight of cardboard.



—Alphabetical punch with a speed of 125 per minute.



—Automatic sorter with a speed of 420 per minute.



—Printing tabulator with automatic sub and grand totals.

Exhibit 17. Examples of the Chief Types of Machines in use for Mechanical Tabulation. (Courtesy of Powers Accounting Machine Corporation.)

A good deal of technical knowledge is required to decide when a given body of information should be tabulated by hand or by mechanical means. It is almost never worthwhile, however, to use electrical machines to sort a few hundred items and then, too, the question may be settled on financial grounds alone. With patience, an individual worker can himself classify his returns but machine tabulation requires elaborate equipment.

Hand Sorting

If you decide to sort your data by hand you may find it desirable either to work from the schedules themselves or to transfer the original information to large "work sheets." Both schemes have their advantages depending upon the nature and use of the tabulations you are making. The employment of the schedules themselves avoids the necessity of copying your data and also reduces errors in transcription. Sometimes this type of classification can be further simplified by using forms of different colors. Returns from doctors might be recorded on white schedules, those from lawyers on brown, etc. On the other hand, work sheets which bring your facts together on a few large forms often are an aid in studying the data, particularly the interrelationships of one set of facts with another. Frequently it is advisable to use separate work sheets for each of your main classes—thus all the returns from men might be put on one set of sheets and from women on another.

Having classified your facts, you will next have to compute totals, ratios and percentages. Until these processes have been completed you are scarcely in a posi-

Georgia — 3

D 42

Per cent. Negro Farmers

Counties	Total	Total		Negro			Per Cent. Negro		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	1	2	3	4	5	6	7	8	9
Bartow p5t									
Total	5691	4269	1422	998	699	299	18.4	17.5	21.0
Owners and Tenants	2655	2579	76	372	360	12	14.0	14.0	~~15.8~~
Managers and foremen	6	6	0	0	0	0	0	0	0
Laborers	3027	1684	1345	626	339	287	20.7	20.1	21.3
Wage workers	772	612	160	221	159	62	28.6	26.0	38.8
Unpaid family workers	2257	1072	1185	405	180	225	17.9	16.8	19.0
	5690 Check		1421 Check						
Ben Hill p5t									
Total	2237	1793	444	840	603	237	34.6	33.6	53.4
Owners and tenants	946	887	59	277	256	21	29.3	28.9	~~35.5~~
Managers and foremen	6	6	~~385~~	1	1		~~16.7~~	~~16.7~~	0
Laborers	1285	900	385	562	346	216	43.7	38.4	56.1
Wage workers	488	417	71	245	194	51	50.2	46.5	71.8
Unpaid family workers	797	483	314	317	152	165	39.8	31.5	52.5
Berrien p5t									
Total	4346	3637	709	492	341	151	16.3	9.4	21.3
Owners and Tenants	1882	1826	56	114	104	10	6.0	~~5.7~~	17.9
Managers and foremen	5	3	2				0	0	0
Laborers	2459	1808	651	378	237	141	15.4	13.1	21.7
Wage workers	954	813	141	194	137	57	20.2	16.9	40.4
Unpaid family workers	1505	995	510	184	100	84	12.3	10.1	16.5
Bibb p5t									
Total	2523	2219	304	1545	1298	247	42.7	58.5	81.3
Owners and tenants	966	915	51	383	367	16	39.6	40.1	~~31.4~~
Managers and foremen	33	32	2	5	5		~~14.7~~	~~15.6~~	~~0~~
Laborers	1518	1270	248	1156	925	231	76.2	72.8	93.1

Exhibit 18. An actual work sheet, from a study of Negro agricultural conditions in five southern states. An ordinary ruled form, in red and light blue, was used and the headings written in. Columns 2, 3, 5, and 6, as taken from 1930 Census, were copied in black ink, and the other figures, derived, in red. Three sets of pencil checks indicate that the figures were examined for accuracy as many times. Queries and supplemental data, in pencil or ink, appear where needed; note, for instance, that the addition was queried in Column 3, but found to be according to Census and O.K.'d, and that a wide discrepancy between the per cent of Negro population and Negro farmers (Column 7) necessitated a note scrawled in the margin. Many checks and queries would be intelligible only to those engaged in the study.

tion to tell what your figures really show. For example, the tabulations of the 1930 Census revealed that out of 122,775,046 inhabitants 54,406,017 lived in rural areas while in 1920 the total population was 117,823,-165 and the rural inhabitants 51,406,017. Such figures are hard to compare until the percentages have been worked out showing that 44 per cent of our population was rural in 1930 as compared with 49 per cent in 1920.

A whole series of complicated "gadgets" have recently been invented for reducing the wear and tear involved in statistical computations. Electrically driven adding machines are available that keep accurate records of all the figures combined in a given total or sub-total. Slide rules, comptometers and mechanical computing devices can greatly speed the process of multiplication and division. Thus, ratios and percentages can be compiled semi-automatically. It is amazing the number of statistical computations that a competent clerk can turn out in a single day if provided with the latest machines. So far as possible you should avail yourself of these aids.

After your data have been classified, totaled and percentaged you may not be more than well embarked upon your statistical voyage of discovery. Indeed, many quantitative studies that are based upon published records begin with data that have been through all the processes just described. If your study involves the use of such secondary statistical sources you should become thoroughly familiar with the methods of classification and tabulation employed by the original investigator since, as we have seen, each compilation has its own peculiarities. This is especially true when studies em-

ploy bodies of statistics from more than one source. It is never safe to assume that the same label means the same thing from one investigation to another. Even the Federal Census does not employ identical categories from one enumeration to another. The term "farm population" has been defined by the government in different ways from census to census. Before making comparisons it is essential to make sure that the data are really comparable.

Standardizing the Results

Many series of data must be standardized before they can be compared. It would be very unfair to contrast mortality rates among a group of young Chinese students temporarily residing in America with average rates for our population as a whole. Instead, the death rates among the Chinese might better be compared with those for American students of the same age.

Professor Frank A. Ross reports that when the American troops were being evacuated from France the "venereal rates" at the ports as computed by the army rose to gigantic proportions. Explanation lies in the fact that each contingent was ordered to leave its venereal cases behind before embarking for the United States. Thus "venereal rates" should have been computed on the basis of the total number of soldiers passing through each port rather than on the number of those present in the area on a given day.[5]

An important requirement of many studies is to ar-

[5] Ross, Frank A., "The Use of Statistical Data and Techniques in Sociology." Paper read before the Twenty-seventh Annual Meeting of the American Sociological Society in Cincinnati, Ohio, December, 1932.

rive at standards of comparison. In one American city the death rates among illegitimate infants is three times the rate for legitimate babies, but you may get a new perspective on this fact when you learn that the differential is much larger in many other places.

It is not the purpose of this volume to write a treatise on statistics. A whole series of excellent texts are already available on the subject, particularly *Principles and Methods of Statistics* by Professor Robert E. Chaddock, which anyone making a quantitative social study should consult. At this point the aim is merely to explain the purpose behind the ever-growing array of statistical tools.

During recent years the scope and variety of statistical techniques have developed very rapidly. There was a time not long ago when a statistician did nearly all his work with a few simple implements such as the arithmetic average and percentages. Today, however, all that has been changed. Statisticians have evolved a maze of statistical devices. For instance, an average—which is simply a figure used to represent a number of individual measurements—can be derived in several different ways. Thus we find statisticians discriminating in their use of the weighted and unweighted arithmetic average, the median, the mode, the geometric mean and the harmonic mean. For different purposes one kind of average is better than another.

The Average and Variation

Supposing you find that computed on the ordinary arithmetic basis the average income of a group of wage earners is $1500 a year. There is a certain definiteness

and finality about such a simple result that may lead you astray. You are likely to feel that you know more about the incomes of these people than you actually do. You must consider the nature of the average you are talking about. Each one is based upon quite diverse assumptions often resulting in surprisingly different results. Take the investigations of the National Bureau of Economic Research into the distribution of personal incomes. The facts showed that, omitting soldiers, the average income in 1918, computed on the usual basis of dividing the total income by the number of persons receiving it, amounted to $1543 but that if one took the mode, or, in other words, the most numerous income class, the usual salary was $957. In this case the arithmetic average was 61 per cent greater than the mode.

Why this amazing difference? The answer is found in the fact that the use of the arithmetic average causes the few workers who receive large salaries to raise the level of all the others in the group. One way of getting around the difficulty is to employ the median, or in other words, the salary representing the half-way point up and down the income ladder. The National Bureau found that in 1918 this figure was $1140 or about midway between the other two averages. When simple averages differ so widely no wonder people become skeptical about the results of statistical studies.

An average cannot adequately characterize a large number of separate measurements. In addition to the average it is necessary to know how the items are distributed around this central core. One of the most elementary ways of meeting this need is to give the range

of the units studied. But the range may give undue importance to a few exceptional extremes and so, as a rule, more precise measures of variation are used such as the semi-quartile range, the average deviation and the standard deviation.

Mathematicians have also worked out methods for determining the probable error of their computations. As used in this sense an error does not mean a mistake but rather the measurement of the range of variation within which half your observed values fall. Thus if the average height of a representative sample of 1,000 soldiers is sixty-seven inches with a probable error (PE) of plus or minus ($\pm$) two inches, it means that, on the average, half of the soldiers in the particular army being studied are between sixty-five and sixty-nine inches tall.

Correlation

Elaborate advances have also been made in statistical synthesis as well as in analysis. The student of society is constantly under the necessity of dealing with the degrees of interrelationships between series of phenomena. In general, the size of families decreases as the economic status of the parents improves but there are rich men who have large families. Thus the question arises, exactly how pronounced is the tendency for the size of families to decrease as the economic status of the parents improves. Professor Karl Pearson and others have worked out a method of correlation for dealing with this type of problem. The simpler meaning of the "Coefficient of Correlation" is thus brought out by Dr. Harry L. Hollingworth:

"Children of the same family resemble each other in physical appearance more than do children chosen at random. And twins resemble each other still more closely than do brothers and sisters who are not twins. Studies have been made in which children have been measured in various physical characteristics and the degree of resemblance stated in just such coefficients of similarity as those we have described. When this is done it is found that children of the same family give coefficients of resemblance of about plus .40. Twins, however, give coefficients of about plus .80. We may then say, by way of concrete illustration, that judgments that agree with each other by a coefficient of .40 are as similar as children of the same family while judgments that give coefficients of similarity as great as .80 are as alike as twins."[6]

It should be clearly understood that a high coefficient of correlation between series of data does not necessarily prove a causal connection between them. Both sets of figures may be the result of the same influence or the relationship may be purely accidental. For example, an unpublished study by Dr. George Marshall made at the Brookings Institution at Washington showed a coefficient of correlation of plus .86 between the death rate in Hyderabad, India, from 1911 to 1919 and variations in the membership of the International Association of Machinists in America from 1912 to 1920. Obviously such a correlation has no significance but there is no

[6] Hollingworth, Harry L., *Judging Human Character* (New York; D. Appleton-Century Company, 1922), p. 17.

more common fallacy than to imagine that because prolonged mathematical computations have been made, the results are valid and reliable.[7]

A coefficient of correlation can be made to show the degree of association between two or more variables. Moreover, by the allied techniques of partial correlation it is possible to show the interrelationship of two variables when a third factor is held constant. It should be pointed out that much the same result can often be obtained by the simple process of classification. If you are studying the interrelationships between death rates and health factors, you may want to eliminate the influence of economic conditions, which you can do either by holding the economic factor constant through partial correlation or by confining your study to people who all fall into the same income class.

Coefficients have been evolved for measuring the interrelationships between bodies of data that cannot, like degrees of heat on a thermometer, be expressed in terms of a continuous quantitative scale. You may know that some of the people you are studying fall into the class of grammar school students; others may be of high school grade, while a third group are college students, and a fourth class are post-graduates. Under certain circumstances even such data can be handled quite as satisfactorily as quantitatively measurable returns. Tetrachoric coefficients have been devised for dealing with information of this sort. In social research such coefficients are employed much less frequently than

[7] Cohen, Morris R., *Reason and Nature* (New York; Harcourt Brace & Company, 1931), pp. 91-92.

Pearsonian coefficients largely because they are less well understood by social investigators.

Time Series and Index Numbers

Another great function of statistical techniques is to analyze historical series, or in more simple language, data covering a period of time. Suppose you want to investigate some phase of American economic or social life during the last generation. How can you compare figures now and twenty-five years ago? You may need to begin by eliminating the influence of a long time or secular trend. In 1900 the total population of the United States was only 76,000,000 compared with nearly 123,000,000 in 1930. Clearly present-day returns for the country as a whole cannot be compared directly with aggregates for thirty years ago. Then there is the matter of seasonal fluctuations. The work of the world varies from month to month. Death rates regularly reach a peak in July and August; thus it is not legitimate to compare directly mortality rates in summer with those in winter. Finally, there is the matter of cyclical movements. Business is better some years than others. Obviously 1908 was a depression year and 1928 a boom period. If you want to compare statistical averages for these two periods you may need to correct for changes in the business cycle.

The subject of "index numbers" is closely related to the analysis of time series. A person who wants to know how retail food prices of today compare with the prewar figures will need to employ a method of combining the prices of eggs, meat, milk, butter, etc., in such a way that the results will actually reflect the ups and downs

in the cost of the average full market basket. Since millions of people have their wages adjusted in accordance with changes in the price level, it is of the utmost importance that such indices be computed on a reliable basis.

Index numbers can be worked out on many different bases, and their reliability is in part a matter of good sampling—a subject already discussed in Chapter VIII. At this point we will confine ourselves to the adequacy of the formulae employed.

In *The Making of Index Numbers*[8] Professor Irving Fisher actually compared the results obtained when 134 formulae were used in analyzing the same price data. Taking 1913 as the base of 100, he compiled 134 different series of index numbers covering the years 1914 to 1918 inclusive. Formula #12 showed that at one extreme the level in 1918 was 244 or 144 per cent above the pre-war base, but at the other extreme, formula #52 made it appear that the 1918 level was 165 or only 65 per cent above the 1913 level. It would be obvious to anyone knowing the theoretical foundations on which these formulae rest that both equations were faulty in the first place. You should use one of the more reliable equations such as Professor Fisher's "ideal" formula.

So far as trends are concerned statisticians have developed schemes for fitting straight lines or parabolas to data extending over a period of time. This process is especially important when trying to predict the future. The processes of a great mathematician when dealing with a problem of this character may be followed

[8] Fisher, Irving, *The Making of Index Numbers* (New York; Houghton Mifflin Company, 1922), Chap. XII, pp. 243-269.

in Professor Henry L. Moore's *Forecasting the Yield and the Price of Cotton.*[9]

This discussion does not begin to exhaust the list of techniques developed by statisticians but enough has been said to show the kinds of things that they can do.

Anyone who intends to use statistical tools should have an adequate knowledge of the mathematical bases of the various procedures. All statistical techniques rest upon very definite assumptions which you need to understand before employing them. For example, Pearsonian correlation is predicated on the theory that your data conform to the normal frequency distribution, while as a matter of fact many series of social information are distinctly askew. To correlate such lopsided figures may not only be a sheer waste of time, but may yield results that are totally misleading. In many instances statistical techniques are applied blindly and unintelligently.

Qualitative Aspects of Statistics

Statistical processes are far from being merely mechanical procedures. Intelligence and common sense must enter at every step. Dr. Dorothy S. Thomas has given a revealing account of the many qualitative considerations that arose in the course of a quantitative investigation. She wanted to study "The Social Aspects of the Business Cycle"[10] from 1854 to 1913. But on what basis should she choose the index of business fluctuations? Many business indices were available but their

[9] Moore, Henry Ludwell, *Forecasting the Yield and the Price of Cotton* (New York; The Macmillan Company, 1917).

[10] Thomas, Dorothy S., "Statistics in Social Research," *American Journal of Sociology,* Vol. XXXV, No. 1, September, 1929, p. 1.

gyrations were not similar. Thus her results were bound to be influenced by the particular series employed. As a matter of fact she developed an index of business fluctuations based upon combined figures for exports, freight traffic, pig iron production, coal output, bank clearings and unemployment, but, as she herself points out, the selection of these series was arbitrary. Some other investigator might with equal reason have chosen other series. The same type of personal considerations arose when deciding upon her index of social data. Marriage rates, crime statistics, deaths from tuberculosis, etc., were used but no series was included unless there was reasonable *a priori* evidence to show that the phenomena were related to the business cycle. For example, death rates from cancer were purposely omitted because medical research does not lead to the conclusion that such rates are interrelated with the ups and downs of business.

Before actually correlating her two sets of data Miss Thomas had to remove many disturbing factors. All the series showed secular trends. In the case of economic indices, these trends were usually upward, but birth rates and other social measures showed a downward tendency. Obviously these trends had to be "removed or allowed for." But the manner of correcting for such trends is also, in part, a subjective matter. Miss Thomas finally decided to fit parabolas to the data rather than employ curves drawn "free hand" because this mechanical procedure eliminated the danger that her personal bias might influence the results. Such personal considerations enter into almost every statistical inquiry.

Enough has been said to demonstrate that qualitative

considerations enter into quantitative studies. Detailed knowledge, common sense and good judgment are basic even to statistical inquiries. To quote Dr. Edwin B. Wilson:

> "Mathematics is a queer horse and all too easily runs away with its rider; and then there is such a satisfaction in trying its various gaits in all sorts of roads that many a rider has gone off in almost the opposite direction from the path he should have followed in his pursuit of the solution to some scientific problem."[11]

Preparing Tables and Charts

After completing your statistical analysis you will want to arrange your facts in tabular form for presentation to your reader. You had better not proceed with this work until the outline of your final report is fairly clear in your mind. If you decide to make your basic tabulations an appendix to your final report, you will probably want to group your figures in as large tables as the printed page will allow. On the other hand, if you decide to interlard your tabular materials in the body of the text, you will probably want a series of small tables each one of which deals with the particular subject you happen to be discussing.

In statistical analysis it often helps to plot your facts in chart form. It is always a help to see a scatter diagram of two series of data before correlating them. Moreover,

[11] Wilson, Edwin B., "Mathematics and Statistics," Presidential Address at the Ninety-first Annual Meeting of the American Statistical Association, December, 1929. *Journal of the American Statistical Association*, Vol. XXV, new series No. 169, March, 1930, p. 5.

a line chart showing net immigration over a period of years may tell you more than a whole page of statistics. Such graphic devices are not only useful in making information clear and vivid in your own mind but they can be used equally well to get the facts across to the reader. Anyone interested in visual methods of handling facts is advised to consult a book like Mr. W. C. Brinton's *Graphic Methods for Presenting Facts*.[12] Naturally, charts for publication will need to be more carefully drawn than those intended merely for your own use.

The creation of any series of charts and tables for publication is usually quite laborious. Not only should each one be clear and self-contained but the entire set of tables and graphs should be uniform. The same item should be referred to in identical terms. It is very confusing to have our country population labeled as "agricultural" in one heading and as "rural" in another. Then, too, there should be consistency in the kind of titles employed. Some people like short snappy headings while others prefer detailed ones. This is primarily a matter of taste; decide upon the method you prefer and then stick to it.

Throughout your statistical computations check and re-check your findings; not merely because errors are likely to lead you and your reader astray but also because the person who discovers a few minor inaccuracies may have his confidence shaken in your entire study.

This discussion has probably made it clear that statistical studies are costly and time-consuming. In addition to his books, a qualitative worker needs little

[12] Cf. Brinton, W. C., *Graphic Methods for Presenting Facts* (New York; Engineering Publishing Company, 1920).

equipment beyond a typist, but a statistical investigator may need a laboratory and a corps of clerical helpers.[13] An individual investigator should not attempt elaborate statistical studies without first weighing the costs.

In conclusion we cannot do better than summarize ten points raised by Professor C. E. Gehlke regarding the use of statistics in social research. (1) Statistics is a method of measurement that (2) is not applicable to all the facts of life but which (3) can be helpful in showing "causation," or in other words the sequences of certain occurrences. (4) To a considerable extent the statistical methods of correlation are identical with the experimental methods of the natural sciences but (5) because social phenomena cannot, as a rule, be repeated under identical circumstances there is greater inaccuracy in predictions based upon statistical computations. (6) Statistical results are reliable only in so far as the basic data conform to the fundamental assumptions of the particular statistical technique being employed and (7) as a rule, it is desirable to use the simplest statistical method that fits the facts. (8) Because so many social facts are not measurable, it is necessary to introduce qualitative considerations into quantitative studies; (9) moreover, precise definitions and units of measurement must frequently be devised. (10) It thus becomes obvious that statistical studies are costly, so much so that they are increasingly beyond the resources of the individual investigator.[14]

[13] Cf. Mitchell, Wesley C., "Quantitative Analysis in Economic Theory," *American Economic Review*, Vol. XV, No. 1, March, 1925, p. 2.

[14] Gehlke, C. E., "The Use and Limitations of Statistics in Sociological Research," *Proceedings American Sociological Society*, Vol. XXXI, 1926, p. 141.

Chapter XI

WRITING THE REPORT

Assuming the facts of an inquiry have been assembled and studied, the problems next arise of writing and disseminating the results. Suppose you have digested and analyzed your materials. They lie before you—reports of interviews, notes, charts, schedules, statistical tables, maps and working classifications. Weaving the results into a manuscript may seem easy, and on one basis it is. You write a brief introduction, tie the conclusions together with a few words, throw in tables and charts with short explanatory sentences, then a summary, and the work is over.

But in many pieces of social research it is not enough to put down the materials gathered through interviews, questionnaires, tabulations and secondary research. There is the further labor of bringing out the "point," of showing the facts in perspective, of making the reader see the woods as well as the trees. There is the job of taking the materials and weaving them together, showing the emphasis, making clear their connections, building up a true picture of reality. This process is usually laborious and time-consuming. Hastily written reports are likely to express their ideas inaccurately.

Writing a report takes time. Someone has aptly said that good literature is not written, it is rewritten. The

Blankford, North Carolina

Location and Personality

Blankford, one of North Carolina's oldest villages, is located in the eastern part of the State, in the central part of Gates County along a deep bend in the Perquimans River. The community is the only banking and the chief trading centre of the County and as the County Seat, it is the hub of a wide farming area.

Blankford is a picturesque little town with its old homes and mills skirting the river banks. Freight boats lie at anchor at the Eastern Oil Company's wharves. Great trees form high arches along the streets. Out in the country in all directions stretch level fertile farm lands where there are old plantation homes with pillared porticoes. Here and there are little cabins and neat farm houses. In the woods the gray moss hangs thick. There is nothing bleak about this country. Even the little unpainted negro cabins are appealing with the peach trees by the porches in full bloom. There are creeks running through the fields, across the roads, in and out among the trees--everywhere. Two-wheel donkey carts pass by on country roads. No one seems to be in a hurry.

The village shows few landmarks of its historic background but the story is written deep in the hearts of the people who are proud, patriotic, religious, wholly American. They do not hurry and they are not restless or dissatisfied. Like their fathers and grandfathers they live well and easily. The old settlers never had to wrestle with a stubborn soil. The land is flat as a prairie. If they wanted fish there were plenty in the many creeks and the rivers; there was no shortage of firewood; and anything that would grow anywhere would grow on their plantations. Today Blankford reflects this early manner of living. It is not the bustling, industrial trade center but is quiet, attends to its own affairs, takes things as they come and raises enough for its own needs. There is little poverty, houses are well cared for. The main streets are paved. Though the colored people outnumber the whites they are not segregated. It is difficult to distinguish their homes from the homes of the white people. There are few new families in Blankford. One hears the names of certain people repeated constantly, and all these families trace their lineage back to the first settlement.

George Smith and his friends and their families and servants were the first settlers, and proved to be the vanguard of a long procession of English settlers. The forests were cleared and small farms and plantations sprang up along the borders of the streams. By 1670 the colony had grown to 2,000 population, for the news of the fertile soil, unlimited forests, good harbors and streams plentiful with fish spread rapidly. Men came here for three reasons--to find better farm lands, wider range for their cattle and they came to be by themselves and to avoid taxes, tithes, and rents. They were individualists and lovers of home and freedom....

Exhibit 19. Extract from a preliminary write-up of a Field Worker immediately after completing the investigation of an agricultural village.

same is true of good report writing. More than twelve years were devoted by Adam Smith to producing his *Wealth of Nations*; Macaulay sought for days for the right word; and William James testifies that the writing of his *Psychology* required him to get up daily at four in the morning, to write every page of the book four or five times over, and to carry the subject on his mind for nine years.[1] Darwin tells us that he never studied style as such but merely tried to get his subject clearly in his mind and express it in common language, but even so it required a good deal of thought before the simplest arrangement of words occurred to him.[2]

The great masters take infinite pains when presenting the results of their studies—and for good reason. Writing and thinking are closely connected. Vague writing reflects vague thinking. This is the reason that most first-class investigators spend a lot of time revising their reports. Slightly alter the phrasing of a statement of fact and you change not merely your style but the idea as well.

In social research the chief purpose of the polishing process is not to develop a literary style but to increase precision and clarity. The person who bewails his ability to write a clear report may well consider whether the trouble is with his writing or with his thinking. Careless thinking begets careless writing. When you have thought clearly you seldom will have trouble expressing yourself clearly.[3]

[1] *Letters of William James*, edited by his son, Henry James (Boston; The Atlantic Monthly Press, 1920), Vol. I, p. 296.

[2] Cf. *The Journals of Arnold Bennett*, edited by Newman Flower (New York; Viking Press, 1932), Vol. I, p. 123.

[3] Cf. Bennett, Arnold, *Literary Taste and How to Form It* (New York; Doubleday, Doran & Company, Inc., 1910), p. 46.

The close relationship between writing and thinking is shown by the experience of Professor Bronislaw Malinowski, who relates that frequently a problem seemed settled and clear till he began to write down a short preliminary sketch of results. Only then did he see the enormous deficiencies of his data, thus leading him to new problems. In fact, he spent months between his first and second expeditions in search of anthropological material, and over a year between the second and third, going over all his materials and making parts of them almost ready for publication, though each time he knew he would have to rewrite them. He found such cross-fertilization of constructive work and observation most valuable and came to the conclusion that he could not have made real headway without such preliminary write-ups.[4]

Need for Clarity

The essential qualification of good report-writing is clarity. In most cases this is not easy to achieve. It is surprising to find the difficulties involved in presenting a lucid statement of even the simplest research processes. That delightful book, *Boners,* which is a collection of school-boy wisdom, or "knowledge as it is sometimes written," contains a number of excellent examples of the difficulties connected with descriptions of even the commonest ideas. For instance, one young hopeful defined a circle as: "Take your center and take your distance and draw a straight curved line. This is a circle

[4] Malinowski, Bronislaw, *Argonauts of the Western Pacific* (London; George Routledge & Sons, 1922), p. 13.

and all lines drawn to it are equal."[5] But, you will say, this is the adolescent writing of a school-boy; social investigators could not be guilty of any such crime. Probably not, but it represents in exaggerated form what is sometimes put out under the guise of erudition. One publisher has actually recorded that the great majority of all manuscripts submitted to him by college professors are rejected because of slovenly writing.[6]

Unfortunately, the tendency for colleges and universities to judge men by the quantity of their "production" has led to a welter of hastily written and inadequate researches. Clumsy writing can virtually nullify the value of the most careful observation. Miss Van Kleeck has suggested that social research workers must add to their equipment the skill of an artist. She points out that a literary production like Zola's *Germinal* describes grievances and human relations in the coal mines of France with a fidelity to be emulated by social investigators.[7]

After saying that report writing is hard work and that it means grasping a subject and expressing it clearly, it follows that there can be little positive illumination of the secrets of good writing. Topics, interests and intentions vary as well as the facts themselves. At best, one may with some timidity present counsels, cautions, and the accumulated experience of certain investigators. At worst, these may sound like the staid rules of a college

[5] From *Boners,* copyright, 1931, by The Viking Press, Inc., N. Y., p. 69.

[6] Johnson, Burges, *Good Writing* (Syracuse, N. Y.; Syracuse University, 1932), p. 9.

[7] Van Kleeck, Mary, "Procedure Followed in Studying the Industrial Representation Plan of the Colorado Fuel and Iron Company," *Journal of Personnel Research,* Vol. IV, Nos. 4-5, 1925, p. 152.

rhetoric. In the last analysis each investigator must adapt these suggestions to meet the needs of his particular temperament and problem.

Preparing an Outline

It is generally desirable for an investigator to begin the writing process by preparing an outline, which to be of most value should be a brief résumé of the final document—not merely a list of the topics to be treated. A conscious effort should be made to bring out the plan of presentation to be followed as well as the chief findings of the study.

Such an outline has several distinct uses. It shows whether you have sufficiently analyzed your basic data, since obviously you cannot prepare a summary of major findings until you have thoroughly assimilated the materials gathered. If you start to write such an outline and discover that you cannot yet tell what are your main conclusions it is sure proof that you have not sufficiently digested your facts.

A detailed outline can help to improve the whole writing process. Anyone who has gone to the labor and trouble of writing the complete report of a study is loath to consider seriously a fundamentally different method of organization and presentation. The outline, however, gets around this difficulty since it presents for consideration and discussion only a tentative method of treatment. While the report is still in outline form an investigator is usually quite willing to accept suggestions for basic changes in the method of treating his topic.

If the outline is well done it will throw into relief

the main findings of the study and will indicate the order in which they will be presented. It will give a sense of the "whole" and will describe the main topics that you want to get across to the reader.

When deciding upon the arrangement of the outline, there is a natural inclination to present materials in the order in which they were assembled. Generally this leads to drabness and the feeling that the data are being given for their own sake. Facts should be presented as a means of throwing light upon an important problem—not as an end in themselves.

Problems of Writing

Coming now to the actual writing, the chief problems are to tell an accurate story, to explain the relations between the facts, to depict a social scene with its dynamic flux, or to present a conclusion with the supporting evidence. And you must tell this story, explain the facts, paint the picture, build up the conclusion so well that the words, or as someone has called them—the magic symbols—will accurately reproduce in another mind exactly what you intend to convey. The problem is to transfer something which is clear in your own mind to the quite different atmosphere of another mind. Here is where the task of analysis and the supposedly more genteel job of writing overlap. If you have not made clear to yourself the facts, their emphasis, the perspective from which you look at them, and their "meanings," you may be sure you will never be able to communicate their peculiarities to anyone else.

One of the primary requirements of scientific writing is that the investigator, unlike the popular writer,

is under the necessity of presenting the evidence for his generalizations. He must display the scope and quality of his materials and the nature of his reasonings. Such information is essential to enable other students to evaluate and check up on the work of the study. The supporting evidence, however, does not need necessarily to appear in the body of the report. Often it will be found desirable to confine the text to the outstanding problems and findings and to refer the reader to an appendix for the detailed proof, for a precise statement of the methodology employed, and for a technical discussion of the failures and blind alleys encountered in the study. This arrangement enables you to give the main conclusions without seriously cluttering them up with extraneous matters and labored details.

It frequently happens that a study has gathered so much material that you hardly know where to begin the writing process. You might imagine that you would best start at the beginning of the report and go through to the end. But in preparing a long manuscript it is often an economy of time and effort to write up the different elements separately. After you have clearly described each major aspect of your inquiry the task of combining the different sections into a unified report can be handled as another problem.

One competent research worker has found it useful to put at the top of separate sheets of paper the chief topics and conclusions of his study. Next he takes up each sheet separately and writes out the facts bearing on each heading. After all his main propositions have been treated thus, he shuffles and reshuffles his sheets with a view to determining the best sequence for presenting

the different elements. After deciding upon the best arrangement, he proceeds to write the necessary connective sentences and paragraphs. The introduction to the study he almost invariably leaves until the last.

One great advantage of this procedure is that it breaks down the writing problem into a series of comparatively simple steps. Unless you adopt some such device, the danger is that you will be swamped by the large amount of information collected and will waste time floundering about in a sea of facts.

Mrs. Gertrude Atherton was recently asked how it was possible for such a long book as her *Adventures of a Novelist* to retain its vibrancy to the end. She explained that her method of writing was an important factor. Instead of trying to produce an entire manuscript at once she alternated periods of writing and of revision. She wrote by hand and at top speed a first draft of each chapter and then took time to copy it at leisure on a typewriter. These periods of respite from creative writing avoided the mental fatigue which so often betrays itself at the end of a long manuscript. Even so, she revised the entire book after it had been written the first time. Every author must experiment for himself regarding the methods of writing best suited to his temperament and needs.[8]

An investigator when writing up his findings is likely to be influenced by the time and trouble involved in assembling the materials in the first place. It is hard to discard data that have cost much trouble to assemble, but that is frequently necessary. We have already seen that the Census Bureau and other governmental agen-

[8] "Letter of Amy Vanderbilt," *Time,* April 10, 1933, pp. 11-12.

cies gather many more facts than they can actually publish.

It is important that a manuscript should show progress and direction. For this reason you should not only tell what you did but why you did it. A reader can digest many apparently dull details if he knows that they will lead to important conclusions. Very frequently it will be found useful to insert "signpost" sentences throughout a report telling the reader where he is going. Such sentences may recall the original purpose of the piece of research and then tell how far the discussion has proceeded and where it will go next.

The Audience

To write a good report you should keep in mind the audience for whom you are writing. It is, of course, possible to write for more than one audience. Professor Irving Fisher, when preparing his *Making of Index Numbers*,[9] had several different types of readers in mind, and in a preliminary section called "Suggestions to Readers" he tells eight types of persons how profitably to find their way through the volume. This, of course, is a more complicated procedure than that employed by most research workers but, in any case, the principle is clear: determine in advance the audience for whom you are writing and then express yourself in such a way as to be clearly understood by these readers. That means of communication is best which is most easily comprehended by your audience.

In writing reports for technical readers it is not de-

[9] Fisher, Irving, *The Making of Index Numbers* (New York; Houghton Mifflin Company, 1922), pp. xvii-xix.

sirable to assume too much specialized knowledge on their part. Even experts do not object to books that define all the terms employed, while documents that take too much information for granted are likely to be unintelligible to many people who might otherwise find the materials of value.

Colonel Leonard P. Ayres has well expressed the problem in his plea for "lucid brevity" on the part of statisticians. He points out that the use of new statistical methods has brought with it a whole vocabulary of strange terms, of mathematical symbols and of Greek letters that are incomprehensible to the layman but a source of deep satisfaction to those of the "inner cult." In addition to cultivating the habit of verifying results statisticians should, he claims, master the art of writing. Only by the use of careful, untechnical language can statistical findings be made available and valuable to the rank and file of intelligent citizens.[10]

Dr. Mordecai Ezekiel believes that even correlation—one of the most complex subjects in statistical analysis—can be made understandable to the layman. After completing the mathematical computations, the next step is to translate the statistical results into intelligent but non-technical phraseology. This may result in simple regression charts, in tables, or in carefully worked out pictorial statements. At this point, says Dr. Ezekiel, many investigators fail to take into account the audience for which they are writing. If they are preparing a technical paper for a scientific journal, a full discus-

[10] Ayres, Leonard P., "The Dilemma of the New Statistics." Presidential Address, 88th Annual Convention of the American Statistical Association, *Journal of American Statistical Association,* Vol. XXII, new series No. 157, March, 1927, pp. 1-8.

sion of the methods and techniques used, statistical and otherwise, will be quite in place, so that their fellow-workers may pass on the adequacy of the work. On the other hand, a large number of technical terms may be out of place in a popular report just as a discussion of the stresses and strains involved in the construction of a building would be inappropriate for an article in *The House Beautiful*.[11]

If such standards can be applied to statisticians dealing with a language that is admittedly difficult to translate, what should be said of the investigator who handles plain ideas in such a way that no one recognizes them? How can facts be understood when they are hidden in a fog of technical verbiage?

Re-writing the Manuscript

It will be amazing if even the experienced research worker produces a satisfactory manuscript on his first attempt. Professional authors often write a single article over and over again. Edward Bok has described the method of writing employed by Robert Louis Stevenson who wrote and re-wrote his articles many times. Even then his corrections on the galley proofs were numerous; sometimes Stevenson would sit for ten minutes at a time, smoking and thinking over a single sentence before revising it. "So hard to find just the right word," he would say.[12] The social investigator may feel that Stevenson overemphasized the polishing process, but certainly rapid writing almost invariably means hard

[11] Ezekiel, Mordecai, *Methods of Correlation Analysis* (New York; John Wiley and Sons, 1930) pp. 350-351.

[12] Bok, Edward, *The Americanization of Edward Bok* (New York; Charles Scribner's Sons, 1920), pp. 113-114.

reading. The report that is hastily dictated is seldom read.

Often it helps to let a manuscript "get cold" before trying to revise it. Immediately after you have finished writing anything, you are likely to consider it an excellent piece of work, but wait a week or two and then see how you feel about it. The phrases you thought so apt when you first wrote them may be difficult to understand when you come to examine them later. The organization of the report which seemed so clear and lucid when you scribbled it down may be anything but clear to your reader. The mind tends to leap from one subject to another. The connection between two topics may have been obvious in your own mind, but have you made the connection clear to the reader? If not, you will need to revise the report.

Editing

Good writing requires observation of the ordinary rules of spelling, grammatical construction and punctuation. Even occasional departures from the literary mores distract the reader from the main business in hand. You should therefore become familiar with the accepted conventions of the writing guild as laid down in standard works on exposition.

A professional editor can almost invariably help to improve a report but he must have special qualifications. The danger is that he will want to over-simplify the findings and to emphasize the bizarre and the unusual. Sensationalism has no place in report writing. One should never sacrifice accuracy and completeness merely to tell a fascinating story. This means that the

editor of research publications must set for himself a very different objective than that of the newspaper reporter.

Editing usually involves much more than crossing T's and dotting I's. Some of the mechanical but jarring

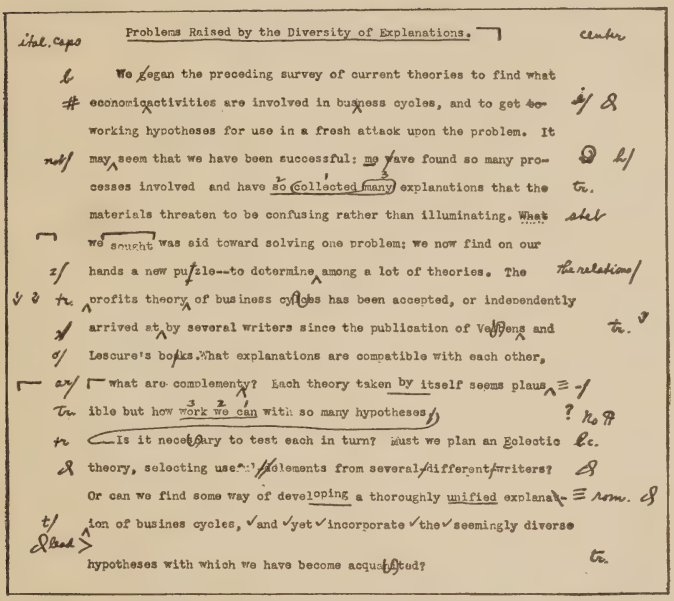

ital. caps
Problems Raised by the Diversity of Explanations.
center
We began the preceding survey of current theories to find what
economic activities are involved in business cycles, and to get
working hypotheses for use in a fresh attack upon the problem. It
may seem that we have been successful: we have found so many pro-
cesses involved and have so collected many explanations that the
materials threaten to be confusing rather than illuminating. What
we sought was aid toward solving one problem: we now find on our
hands a new puzzle--to determine among a lot of theories. The
profits theory of business cycles has been accepted, or independently
arrived at by several writers since the publication of Veblen and
Lescure's books. What explanations are compatible with each other,
what are complementary? Each theory taken by itself seems plausible but how work we can with so many hypotheses?
Is it necessary to test each in turn? Must we plan an eclectic
theory, selecting useful elements from several different writers?
Or can we find some way of developing a thoroughly unified explanation of busines cycles, and yet incorporate the seemingly diverse
hypotheses with which we have become acquainted?

Exhibit 20. SAMPLE OF PROOF READER'S MARKS

defects that you and the editor must be on the look-out for are illustrated in Mr. Shelby Harrison's examination of over 2,000 published survey reports. He found in many cases that the most elementary information was not clear or was missing entirely—titles were obscure, the authorship was omitted, the date of the study was not stated and even the name of the place surveyed was

not given.[13] Obviously a workmanlike report should tell the reader the who, which, what, where, when and why of the study.

The danger is that you will get sick and tired of your manuscript before you have finished revising it. Yet accuracy and precision in details go a long way to give the reader confidence in your thoroughness and competence as an investigator.

After you have written the final report and edited it you will probably want to have the document read by several competent critics. This simple device helps not only to improve the form of presentation but also to eliminate errors of fact. Since even one or two glaring inaccuracies can seriously distract from the value of an inquiry, it is worth while to get the reactions of competent critics before publishing a report. You should avail yourself of this simple corrective process while changes can still be made in the manuscript.

In closing we can but repeat that after all nobody can tell you how to write. You should, of course, familiarize yourself with some excellently written reports but no amount of study will automatically teach you the trick of good report writing. A few rules, however, stand out. Know what you want to say and be simple and unaffected in saying it. Forget that there is such a thing as literary style. If you concentrate on presenting your ideas clearly and concisely, your style will make itself. Use simple, obvious words in preference to long, erudite ones and remember that the chief consideration is to make yourself as clear as possible to your readers.[14]

[13] Harrison, Shelby M., *The Social Survey* (New York; Russell Sage Foundation pamphlet SE 32, 1931), p. 35.

[14] John Palmer Gavit—quoted by Burges Johnson in *Good Writing* (Syracuse, N. Y.; Syracuse University, 1932), p. 41.

Chapter XII

DISSEMINATING AND APPLYING THE FINDINGS

At the end of an investigation, after the report has been written, what shall be done with the findings of the study? There are two schools of thought on the subject which, for want of better terms, may be characterized as "pure" and "applied." At one extreme is the lily-white group that looks upon social inquiry as an end in itself. Like virtue, social studies should be their own reward. Get your facts, work them into careful form and then publish a book, monograph or technical magazine article for others of the profession to see. Avoid publicity, propaganda and programs of action.

This view has a certain logical correctness but it has been attacked as "academic" and "sterile"—the attitude of "dry-as-dust" antiquarians. Fact-finding is said to be a blind for inactivity. Critics have maintained that since we became "sold" on the so-called scientific method, the accumulation of facts has become a substitute, rather than a basis for collective action.[1]

But such complaints frequently fail to appreciate that programs of action, reforms and moral beliefs may interfere with, rather than aid, the search for truth. Thus

[1] Symes, Lillian, "The Great Fact-Finding Farce," *Harper's Monthly Magazine*, Vol. 164, February, 1932, p. 354.

many investigators have come to the conclusion that social science should be interested in how life is lived rather than in making the world a better place in which to live; in studying man's beliefs rather than encouraging specific beliefs. Spreading information, dispensing news, leading the multitudes or guiding the ship of state would be functions outside the field of social science.[2]

On this basis, the applications of the findings of a study are the duty of others, rather than of the investigator himself. And it is true that a student of society may not be the administrative type to put across a program of action. His training is probably such that he is not in a position to measure the political imponderables, the human factors, the pulling of strings, the devious ways and means of getting a program across. As someone has well said there is a great difference between making and spreading butter.

A concrete example of the judgment meted out to "the shrinking college teacher" when he ventures forth into the domain of public relations is revealed by the experience of Professor William Z. Ripley, well-known for his standard work on railroads. He was asked, in connection with the Transportation Act of 1920, to make a study of the proposed consolidation of the country's railways into a limited number of systems. During the course of this report, he pointed out that a short line of 360 miles cutting across Arkansas was "perennially on the verge of bankruptcy or in receivership" and

[2] Ogburn, William F., "The Folkways of a Scientific Sociology." Presidential Address at Twenty-fourth Annual Meeting of the American Sociological Society. *Publications of the American Sociological Society,* Vol. XXIV, 1930, pp. 1-11.

ought never to have been built through this "inhospitable" region, meaning thereby that the territory was never designed by nature to support a dense population. As Professor Ripley himself points out, the people of the beautiful Ozark Mountain district were deeply affronted. One local paper printed the following amusing story:

"That Harvard Professor

"W. Z. Ripley, head of Harvard University, in making a report on the grouping of railroads, turns his lip up at the M. & N. A. and kicks it out of the group as a log road, or at least was built for a log road.

"When we consider that a college professor is so blinded or so ignorant as to think that a railroad crossing a state diagonally and penetrating another state several miles, and when we consider that said road crosses four or five of the most important railroads in the country, then we are not surprised that the Professor's initials are at the tail end of the alphabet. We advise that the great Ripley christen his oldest son 'etc.'

"Mr. Ripley tries to explain himself on the 'inhospital Ozarks' as he terms them, by saying that he did not have reference to the people, but to the rugged country which cannot be made to support a heavy population. Worse wrong than ever, Mr. Ripley. We can feed ourselves and the whole of Massachusetts. Come to the Ozarks, Mr. Ripley, and get beef, pork, bread, turnips, cabbage, potatoes, onions, beans, peas, tomatoes, apples, peaches,

grapes and strawberries for your cellar and your table and zinc and lead for your casket when you die, for the M. & N. A. will not furnish the logs to 'Log you in.'

"Now, Professor, if you are dishing out such judgment to the students of Harvard as that concerning the Ozarks and the M. & N. A., we beg you to keep them at Newton Centre, Mass."[3]

Having indicated some of the reasons why social investigators avoid programs of action, it is only fair to point out that they have a certain responsibility to see that their conclusions are brought to the attention of those who might profit by them. Obviously, as Dr. Charles A. Beard has phrased it, science does not exist "merely to serve the instant need of things, causes, or parties" but this does not mean that scientists can be blind to the needs of the society which sustains them—"the requirements and demands of a world actually wrestling" with concrete problems and insisting upon answers, even though they are of necessity only provisional.[4]

Who is better equipped to evaluate new knowledge than the investigator who gathered and intensively studied it? Who better knows its limitations and its pitfalls? Even if social facts should not be applied by the worker who has gathered them, surely he can assist in their use. At least it is his bounden duty to make the requisite attempt to disseminate the report of his findings rather

[3] Ripley, William Z., *Main Street and Wall Street* (Boston; Little, Brown and Company, 1927), p. 232.

[4] Beard, Charles A., *A Charter for the Social Sciences in the Schools* (New York; Charles Scribner's Sons, 1932), pp. 2-3.

than to leave this task to professional propagandists. Indeed, certain types of investigations, notably community surveys, perforce include programs of action as a main function.

Let us therefore turn to some of the methods used by different research studies for getting facts across to the public. Briefly, they may be summarized as methods of organizing the study, of writing up the results popularly, including the use of magazines and news papers, and the instituting of conferences, exhibits and demonstrations. Obviously, some of these methods cannot be used by the "lone" investigator no matter how important he considers his study to be, but even so, a description of the more complicated techniques of dissemination should be suggestive to him.

Organization

Mr. Edward L. Bernays, an experienced public relations counselor, maintains that publicity is not manufactured by experts, but by "creating events and circumstances, enlisting group leaders, and letting 'types and ink' do the rest."[5] We can see such methods at work in the presentation of more than one research project.

The very organization of a study may determine its eventual reception. There are, from this point of view, two kinds of studies—inside and outside. Some investigators arrange to enter by the front door and receive the hospitality of the people or agency they are studying; others peer in from the outside. Studies made from the outside often arouse suspicion and antagonism but

[5] Flynn, John T., "Edward L. Bernays, The Science of Ballyhoo," *Atlantic Monthly*, Vol. CXLIX, May, 1932, pp. 562 f.

frequently uncover situations that could not be investigated in any other way. The recent inquiry of the Honorable Samuel Seabury into the affairs of New York City is a case in point.

On the other hand, certain studies require the wholehearted cooperation of the institution being investigated. Thus, the study of Dr. Charles A. Beard of the administration and politics of Tokyo, made at the request of Japanese municipal authorities, was assured of serious consideration from the outset because of the way in which the inquiry was organized.[6] If Dr. Beard had set about studying Tokyo politics and government without the cordial cooperation of liberal Japanese authorities, not only might he have been denied access to important sources of materials, but his findings might have been ignored instead of receiving careful attention.

One of the most effective means of spreading the results of a study is to obtain the endorsement of group leaders. Numerous reports acquire acceptability largely because of the influential names attached to their boards of directors and to the power of the organizations making the report. The authority of the various Carnegie Foundation reports derives largely from the eminence of the organization making the study. Their reports receive the kind of serious attention which the work of a free lance investigator could hardly command.[7]

You can often obtain a wider hearing for your work by securing the endorsement of public officials, private

[6] Beard, Charles A., *The Administration and Politics of Tokyo* (New York; The Macmillan Company, 1923).

[7] Cf. Savage, Howard J., *et al.*, "American College Athletics," New York; *Carnegie Foundation for the Advancement of Teaching*, Bulletin No. 23, 1929.

philanthropists, or leading citizens whose names add, not to the truth of the findings, but to their more ready acceptance. Then, too, a preface by some nationally-known authority is often a help. Of course, these procedures sometimes defeat themselves. Several years ago a farm study secured the written endorsement of a well-known American who frankly confessed that he knew very little about the subject he was introducing. Such an endorsement may be a handicap, not an asset.

Popular Summaries

Probably the chief stumbling block to the wide dissemination of any scientific study is that the final report is difficult to understand. This fact is so taken for granted that reviews of research books consider it worthy of remark if a technical book is readable. A recent authoritative work on international debts was characterized as "almost a miracle" because the language employed was so clear that even the lay mind could follow it at every step. The American Historical Association has taken official cognizance of the fact that historical research is no longer read by a general public, that the style of most research reports is so difficult and labored that the influence of the historian has waned.[8]

Thoreau's aphorism still holds: "It takes two to speak the truth; one to speak and one to listen." In the present age when so many powerful agencies are competing for the attention and interest of the public, the worker presenting facts must attempt to speak in such a way

[8] Cf. Jusserand, Jean J.; Abbott, Wilbur C.; Colby, Charles W.; and Bassett, John S., *The Writing of History* (New York; Charles Scribner's Sons, 1926).

that people will listen. The view that science must be "humanized" has probably been best expressed by Professor James Harvey Robinson:

> "Scholars and men of science almost always write more or less unconsciously for one another. . . . They cannot forget their fellow-workers in the field, and properly wish to enjoy the reputation of scientists and scholars and not that of mere popularizers. They are so accustomed to technical terms that they use them without realizing how few of their readers can be expected to understand them. This is the result not of a love of pedantic display but an acceptance of the rules of the game as they have been taught it. . . . The specter haunts them, not of a puzzled and frustrated reader, but of a tart reviewer, likely to accuse them of superficiality or inaccuracy. There is a heavy prejudice in learned circles against the popularizer. Those who are disinclined, or mayhap unable to write plainly and pleasantly for the layman, are prone to denounce all attempts to popularize knowledge as vain or as mere expedients to keep the pot boiling. . . . The style of our serious books is still under the influence of a tenacious scholastic tradition. It is very hard to escape from it sufficiently to meet the real demands of the public. We sadly need something between the half-academic phraseology used in most so-called popular works and the other extreme of 'journalese' with its condescending intimacy and jocosity."[9]

[9] Robinson, James Harvey, *The Humanizing of Knowledge* (New York; Doubleday, Doran & Company, Inc., 1923), pp. 101-104.

Professor Robinson then goes on to plead for a new form of literary ambition that should strive to bring home to the greatest possible number of readers as much knowledge as possible, in the most pleasing, effective and least misleading manner.

This does not mean that research workers should try to write their original reports in *Saturday Evening Post* style. Such an ideal is impossible even if it were desirable. The plain truth is that many investigators cannot express themselves popularly, and that most reports cannot be presented apart from their technical terms. One does not expect the mathematical works of Professor Albert Einstein to be written as a best seller. In addition, the sheer length and detail of any adequate analysis of a subject may repel the general reader.

Many agencies for social research now recognize this situation and publish careful summaries of their chief findings in addition to their technical reports. In 1925, after the United States Coal Commission had completed its study of the coal problem, three members of the research staff prepared a special volume—*What the Coal Commission Found*[10]—in which the separate research reports were briefly summarized. The chief facts of the study and recommendations for the future conduct of the industry were here set forth in a small space, summarizing thousands of pages of testimony and other evidence.

Another illustration of popular report writing is found in the seven-year *Regional Plan of New York and Its Environs,* published in ten volumes of research re-

[10] Hunt, Edward E., *et al., What the Coal Commission Found* (Baltimore; The Williams and Wilkins Company, 1925).

sults, recommendations, maps, drawings, and plans for the future of the city. The Committee in charge of the inquiry then called upon Mr. Robert L. Duffus, a well-known writer, to prepare a popular résumé of the findings. He summarized the reports in simple untechnical language, without the statistical proofs, and with the aid of photographs and vividly drawn pictures, in *Mastering a Metropolis*.[11]

Obviously a study of the future development of New York can only be significant in civic affairs after the plans have been both understood and widely endorsed by all the citizens and civic organizations whose support is necessary to their execution. Such an investigation is, therefore, in peculiar need of translation into a simple readable story.

Most studies will not be so elaborate as to require a separate summary volume but nearly any report can profit by the inclusion, either at the beginning or the end, of a non-technical statement of its findings and conclusions. If you want to study a highly technical scientific report that is interesting and understandable even to the layman read Jacques Loeb's *The Organism as a Whole*.[12]

Magazine and Newspaper Articles

In addition to presenting summaries either in the body of the report, or in a separate document, there is the question of magazine and newspaper publicity. The findings of a study can sometimes be presented to ad-

[11] Duffus, Robert L., *Mastering a Metropolis* (New York; Harper & Brothers, 1930).

[12] Loeb, Jacques, *The Organism as a Whole* (New York; G. P. Putnam's Sons, 1916).

vantage in the form of articles in magazines. Occasionally individual chapters of books appear in journals before the book itself is published. Thus, Professor Henry Clay contributed papers on post-war unemployment to the *Manchester Guardian* in 1923 and on unemployment insurance to the *Manchester Statistical Society* in 1928, most of which he later incorporated into his book: *The Post-War Unemployment Problem*.[13]

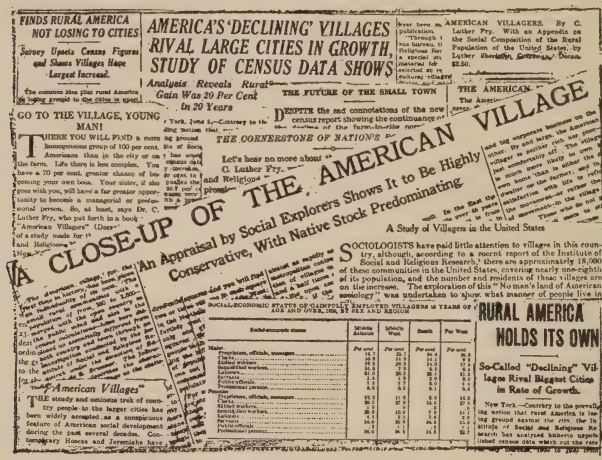
Magazine articles may also be published after the main report has appeared. Dr. Abraham Flexner, shortly after publishing his study on medical education, prepared a number of articles which appeared in the *Atlantic Monthly, World's Work, Review of Reviews*, and *Science*, thus broadcasting the chief findings of his studies to a wider public than any technical report could hope to reach.

It is frequently of value to get the results of an inquiry summarized in the daily press but it should be recognized that there is always the danger that the facts may be seriously garbled. A minor point will often be seized upon and played up as one of the chief findings of the study. This is one reason that many investigators prepare and send to newspapers brief summaries of the findings of a study for release on the day the report is finally published. Such statements should be written as news stories and not as book reviews. If possible, a man thoroughly familiar with the newspaper "game" should prepare these statements.

Newspapers may seem to the research worker to have unreasonable standards of what they consider "news."

[13] Cf. Clay, Henry, *The Post-War Unemployment Problem* (London; The Macmillan Company, 1929).

Suppose that a study sheds light upon an important problem; nevertheless it may get little or no hearing in the press simply because the results were not presented to the editor at the right time or in the right way. A report once published is news only on the day it is released unless it arouses enough response on the part of


FINDS RURAL AMERICA NOT LOSING TO CITIES

Survey Upsets Census Figures and Shows Villages Have Largest Increase.

AMERICA'S 'DECLINING' VILLAGES RIVAL LARGE CITIES IN GROWTH, STUDY OF CENSUS DATA SHOWS

Analysis Reveals Rural Gain Was 20 Per Cent in 20 Years

AMERICAN VILLAGERS. By C. Luther Fry. With an Appendix on the Social Composition of the Rural Population of the United States, by Luther Sheridan Greenwood. Doran. $2.50.

THE FUTURE OF THE SMALL TOWN

DESPITE the sad connotations of the new census report showing the continuance of the decline of the farm-to-city ...

GO TO THE VILLAGE, YOUNG MAN!

THERE YOU WILL FIND a more homogeneous group of 100 per cent. Americans than in the city or on the farm. Life there is less complex. You have a 70 per cent. greater chance of becoming your own boss. Your sister, if she goes with you, will have a far greater opportunity to become a managerial or professional person. So, at least, says Dr. C. Luther Fry, who put forth in a book "American Villagers" (Doran) ... of a study made for the ... and Religious ...

THE CORNERSTONE OF NATION'S ...

Let's hear no more about ... C. Luther Fry ... and Religious ...

A CLOSE-UP OF THE AMERICAN VILLAGE

An Appraisal by Social Explorers Shows It to Be Highly Conservative, With Native Stock Predominating

A Study of Villagers in the United States

SOCIOLOGISTS have paid little attention to villages in this country, although, according to a recent report of the Institute of Social and Religious Research, there are approximately 18,000 of these communities in the United States, covering nearly one-eighth of its population, and the number and residents of these villages are on the increase. The exploration of this "No man's land of American sociology" was undertaken to show what manner of people live in ...

"American Villages"

THE steady and ominous trek of country people to the larger cities has been widely accepted as a conspicuous feature of American social development during the past several decades. Contemporary Hoseas and Jeremiahs have ...

SOCIAL-ECONOMIC STATUS OF GAINFULLY EMPLOYED VILLAGERS 10 YEARS OF AGE AND OVER, 1920, BY SEX AND REGION

Social-economic status	Middle Atlantic	Middle West	South	Far West
	Per cent	Per cent	Per cent	Per cent
Males:				
Proprietors, officials, managers	18.7	22.7	24.4	26.8
Clerks	10.9	11.9	14.1	9.1
Skilled workers	19.3	20.3	14.0	17.4
Semiskilled workers	14.6	7.9	8.5	8.5
Laborers	31.0	28.3	28.1	31.1
Servants	2.6	1.9	2.9	2.0
Public officials	1.3	1.7	2.0	1.4
Professional persons	6.6	6.3	6.1	5.5
Females:				
Proprietors, officials, managers	12.2	11.8	8.0	15.2
Clerks	20.3	27.4	15.6	27.9
Skilled workers	1.0	.9	.3	.6
Semiskilled workers	28.0	10.2	7.9	14.7
Laborers	4.5	2.5	7.8	2.0
Servants	16.0	20.9	44.3	15.3
Public officials	.3	1.1	.5	1.1
Professional persons	16.0	24.5	14.8	22.7

RURAL AMERICA HOLDS ITS OWN

So-Called "Declining" Villages Rival Biggest Cities in Rate of Growth.

New York.—Contrary to the prevailing notion that rural America is losing ground against the city, the Institute of Social and Religious Research has analyzed hitherto unpublished census data which cut the rate ...

Exhibit 21. NEWSPAPER AND MAGAZINE RELEASES AND NOTICES THAT APPEARED AFTER A STUDY OF AMERICAN VILLAGES

the public to force its way into the print a second time. Care should be taken not to release a report on a date that will conflict with much more important news, such as election returns.

A device that has come into use of recent years is to present the chief findings of important reports in a series of dispatches for publication in the newspapers. This scheme was lately employed by the Laymen's Foreign Missions Inquiry. Each day for about a month a

representative of that Inquiry sent out to the newspapers and press associations specially prepared bulletins detailing a part of the findings of "a report that is shortly forthcoming." Of course, the subject itself was of general interest, but the results gained a wider hearing when presented this way. Papers printed the report in various forms, some abridged, some more fully, either as news reports or as feature articles. Soon the nature of the reports drew comments from pulpits and denominational papers so that the newspapers were forced to recognize their "news" value.

Papers throughout the country picked up the story and sent their correspondents to interview prominent churchmen. Editorial comment naturally followed the growing volume of news which the releases of the Inquiry had stirred. In short, over a month's publicity preceded the publication of the book. Obviously, such procedures are not applicable to most reports, for the personnel of the Commission, its backing and the nature of its findings were largely responsible for making possible such an elaborate publicity program.

Other details of publicity include circularizing lists of persons who might be interested in buying the book, sending out complimentary copies of the report, arranging for book reviews in appropriate magazines, etc. Such simple devices hardly need elaboration.

Conferences and Exhibits

Certain studies have employed additional methods of putting across the facts uncovered. One device is to present the results to interested individuals at confer-

ences where findings and programs of action may be set forth. There is no better way to "sell" research facts than to display them under the eyes of interested persons.

Immediately upon the publication of each of the twenty-four monographs put out by the Cleveland School Survey a special luncheon was held at one of the prominent hotels in Cleveland, to which were invited not only school men but representative members of the community. In this way the results of each study were presented to those most directly interested. Discussions were provoked which became newspaper stories because they involved the reactions of men in the public eye, rather than the findings of obscure research workers.

More recently, the foundations cooperating in the five-year study of the *Cost of Medical Care* called a conference which was attended by national leaders in the medical and public health professions and by private individuals interested in the study. Recommendations for action based on the factual studies of the Committee were presented under the ægis of the then Secretary of the Interior. The fact that the majority report called for a radical "socializing of medicine" and that a vigorous minority report was discussed at the same conference drew reams of newspaper comment.

Survey findings can sometimes be set forth in exhibitions such as those employed by the Russell Sage Foundation. Mr. Shelby M. Harrison has thus described the methods used in the Springfield Survey.

> "At the conclusion of the field work an exhibition of survey findings was held in the state ar-

Exhibit 22. CONDITIONS IN LOGGING CAMPS

mory, which was open for ten days and which attracted thousands of visitors, including many from distant parts of the state.

"For two months preceding a special campaign of publicity and promotion was carried on which kept the survey before the people. Old hands at publicity work will recognize the value of such things as invitations sent out by a hospitality committee to mayors throughout the state, exhibit models and devices displayed from time to time in public places; unexplained cartoons pasted in the windows of exhibition headquarters; the state railway companies' offers to transport children free to the exhibition; prizes offered for the five best grammar school essays on 'What I Saw at the Springfield Survey Exhibition'; special days assigned to societies and organizations; a daily department in some of the newspapers under the heading 'Survey Question Box'; proclamations by the mayor making the last day of the Exhibition Springfield Exhibition Day and urging all 'loyal citizens of Springfield to take this last opportunity to inspect and study the many interesting and instructing things there to be found.'

"A large part of the work of preparing exhibits and conducting the publicity campaign was done through local volunteer committees. . . . As the campaign grew, more and more people lent their help until more than 600 were at work. . . ."[14]

[14] Harrison, Shelby M., *In Lincoln's Home Town: How the Springfield Survey Went about Getting Results.* Reprinted from the *Survey*, February 3, 1917 (New York; Russell Sage Foundation pamphlet, 1917).

The exhibit itself must be carefully planned. Maps, charts, pictures, photographs, relief models, cartoons, miniature models of the town, futuristic drawings of the city of the future, etc., should be used to dramatize the findings. The Port Authority Commission at New York has even employed "movies" to popularize the results of some of its studies.[15]

It should be observed that publicity methods are costly and sometimes produce undesirable repercussions. For example, the chief findings of the Pittsburgh Survey were presented in magazine and newspaper articles, in public exhibition, and the like. This airing of the dirty linen of the city resulted "in a revulsion of feeling" so that any mention of that survey in connection with any program of reform was likely to damn it in Pittsburgh.[16]

On the other hand, there is reason to believe that many improvements in local conditions in the Pittsburgh region carried into effect reforms which that survey had first suggested. Telling human beings what to do is an extra-hazardous occupation.

[15] Routzahn, Evart G. and Mary S., *The A B C of Exhibit Planning* (New York; Russell Sage Foundation, 1918). Cf. Fagg, C. C., and Hutchings, E. G., *An Introduction to Regional Surveying* (Cambridge; Cambridge University Press, 1930).

[16] "Round Table of the Technique of the Social Survey," *Proceedings of the American Sociological Society,* Vol. XXII, 1928, p. 224.

Chapter XIII

POSSIBILITIES AND LIMITATIONS OF SOCIAL RESEARCH

Having described certain problems connected with a social investigation, let us conclude by briefly considering some of the possibilities and limitations of social inquiry.

There seems to be no doubt that during the last decade social research like foreign bonds and common stocks was "over-sold" to the American public. People have made extravagant claims about the possibilities of social studies which are not justified by the facts. Graduating classes in our colleges have been assured by commencement orators that social scientists hold the key to the cure of our social ills. Books are being written to show the vast possibilities of social betterment which social research has to offer. A recent volume told its readers "that in the development of the neglected social sciences lies our only hope of remedy" for our present social troubles. Such statements are very flattering to our sense of importance but are they true? The danger is that they raise false hopes. Already there are signs of a reaction.

Let us start with the basic question: Why expect great practical achievements from social research? The answer is found in the history of the natural sciences.

Several centuries ago, a few exceptional individuals began systematic studies of natural phenomena. As a result man gained not only insight into, but a great measure of control over, the physical universe, quite beyond the wildest dreams of early pioneers in these fields. Indeed, so far-reaching have been the changes brought about through the developments of the natural sciences that social, economic and political conditions have been fundamentally altered. The many social problems pressing for solution have raised the question whether similar methods, when applied to social problems, would not yield results comparable to those achieved in the fields of physics and chemistry. Can we not look forward to the time when the development of the so-called social sciences will make it possible for social engineers to deal with human problems with something like the same precision and efficiency that a mechanical engineer handles his problems? This is the alluring hope held out by social research. But is it more than wishful thinking? Certainly the immediate achievements of social studies have not been of a character to justify unmitigated hope about their usefulness in solving our social puzzles.

The Business Cycle

Take the case of the business cycle. As we now realize only too well, fluctuations in business are of the greatest significance to the social as well as to the economic aspects of group life. During the last generation a whole army of research workers devoted themselves to studying the subject; not merely get-rich-quick-Wallingfords who tried to understand the ups and downs of

business in order to make money in Wall Street, but such able and respectable agencies as the National Bureau of Economic Research, the Federal Reserve Board, the Harvard Bureau of Business Research, a number of our great banks, and a battalion of college professors. It would be illuminating to make a survey of the serious works which have appeared in this field. The publications would fill a small library and the time, money and energy represented in their production are enormous.

Now what has been the practical result of this colossal effort to understand this one basic factor in our modern life? The sad story of the staggering decline in commodity prices is probably answer enough, but in addition, listen to Professor Sprague who, as American economic advisor to the Bank of England, is reported to have said:

> " 'Although statisticians and economists in recent years have given more attention to the study of trade fluctuations than to any other problem in the wide field of economic inquiry, there is a conspicuous absence of agreement in our conclusions regarding the causes of fluctuation and the means of establishing a closer approach to stability in the conduct of economic activities.' "[1]

This failure is especially disheartening because the enormous amount of work devoted to the problem had led to a wide-spread hope that business gyrations could be stabilized. In that antediluvian period prior to the great deluge of 1929 there were many people who sin-

[1] McDougall, William, *World Chaos* (New York; Covici Friede, 1932).

cerely believed that society had enough knowledge consciously to control industrial activity.

By using research into the business cycle as an example of failure to achieve control do not imagine that, by selecting an economic issue, we are trying to draw an invidious comparison between the achievements of sociology and those of economics. Quite the contrary. The sole reason for selecting the business cycle for analysis was because the intrinsic importance of the problem, the unusual ability of the number of research workers engaged upon it, the large resources at the command of the investigators, the keen interest of government officials and others in actually applying the results obtained, might reasonably have led to the conclusion that here at least was one important subject of investigation that would yield practical results. But, you may retort, give us more time. The natural sciences have taken centuries to arrive at their present position of authority. In comparison, sociology is a mere babe-in-arms. Wait a hundred years or so, and then see whether similar methods when applied to human situations will not give results comparable to those already achieved in the physical universe.

Psychic Factors in Social Research

This argument might be quite convincing were it not for the fact that there is a great chasm between the social and the natural sciences. If the problems confronting social research were comparable with those dealt with in the physical laboratory then, obviously, comparable results might be expected. This, however, is not the case. In the words of John Dewey:

> "Attention may be directly called to one outstanding difference between physical and social facts. The ideal of the knowledge dealing with the former is the elimination of all factors dependent upon distinctly human response. 'Fact,' physically speaking, is the ultimate residue after human purposes, desires, emotions, ideas and ideals have been systematically excluded. A social 'fact,' on the other hand, is a concretion in external form of precisely these human factors."[2]

The heart of the matter is just this: by eliminating psychological factors from physical research, an investigator gets closer to the ultimate reality he is trying to study. In social inquiry this is not so. The issue is further complicated, as we have seen, by the highly irrational qualities of many of these psychic factors. It was but a few decades ago that Herbert Spencer considered even primitive peoples as highly rational, but recent psychological researches have exploded this whole concept. Human beings love to rationalize and indulge in phantasy. As Vilfredo Pareto has so elaborately pointed out, they engage in many non-logical actions and then invent "good" reasons for doing what they do. All this makes it doubly difficult to deal objectively with the psychic determinants in society.

Here then is another enormous obstacle in the path of the social sciences. But this is not all. Even granting the doubtful assumption that scholars can learn to study social facts with their many subjective, intangible elements in the same detached and significant way that

[2] Dewey, John, "Social Science and Social Control," *The New Republic,* Vol. LXVII, No. 869, July 29, 1931, p. 276.

they have learned to deal with the atom or an amœba there still remains the exceedingly difficult task of applying the findings. In the natural sciences this problem is not insuperable. If one wants to smelt iron, the ore, at least, has nothing to say about the matter. But human beings have everything to say about social control. The natural cussedness of *homo sapiens* is such that it would undoubtedly be a serious obstacle to many forms of purposeful guidance. It has long been known that the Ten Commandments are pretty good rules of conduct, but how many people practice them? If one knew precisely how much alcohol, if any, was beneficial to human beings at every stage of life, do you suppose it would solve the problem of drunkenness?

Research not a Panacea

The obstacles just discussed do not exhaust the array of difficulties in the way of social research, but without pursuing the matter further, enough has been said to show that research is not a panacea for social ills. Moreover, the belief that it is may easily react to the detriment of all that social investigators are trying to do. Instead of being satisfied with modest results, the public, and especially the contributors to social research, will be expecting the impossible.

Sociological research is in a class with history rather than with industrial chemistry. One does not expect the study of history to solve our political dilemmas, yet virtually everybody would admit that historical research is valuable. Certainly sociological research has as much to commend it as the study of historical situations. The amazing thing is not that rural research has failed to

solve the agricultural depression, but that anyone should seriously expect it to do so. Such considerations should make us pause to revaluate the present vogue of mere fact-gathering. It arose as a reaction against the tendency of the patriarchs of social science to draw sweeping generalizations on the basis of inadequate evidence. Before long some of their bright pupils were asking the question: How do you know that is so? What data have you got to prove your statements?

Soon the pendulum had swung away from theorizing to data gathering. On the whole, this development has been a healthy one, but has it gone too far? When social scientists turned themselves to the task of assembling facts about society they found a very different situation confronting them from that which faces the natural scientist. Instead of having to make all observations for themselves they discovered that a whole army of people, including census enumerators, insurance companies, social agencies, *et al.,* were constantly gathering facts about society. And with so many social facts lying around the danger is that you may spend too much time collecting and sorting them and too little time thinking about what they mean.

Social investigators are lucky to have so many materials already collected for them, but this situation also has its disadvantages. Many brands of social facts deteriorate in value very quickly. If the investigators were under the necessity of making each individual observation for themselves—a situation largely true in the physical sciences—they might ponder longer and harder over the meaning and value of the data so laboriously

collected, and might, indeed, assemble an entirely different brand of facts.

Here is another reason for stressing the need for constructive criticism. Too many studies "get by" because no one takes the trouble to show up their defects. Glance over the book reviews of research reports and, with few exceptions, you will look in vain for serious criticism of them. This is owing no doubt to the large number of books to be covered, but nevertheless, this lack of criticism is a great weakness. Nothing would more quickly tend to stop the flow of mediocre studies than a blast of honest criticism. At present the emphasis is upon production of new works and obviously it is important constantly to keep before social investigators the ideal of "keep on digging"; but quality should not be sacrificed for quantity. At this stage of the development of social research a few ounces of genuine criticism might be worth more than a ton of production.

Students of society must try to develop better theoretical foundations for their inquiries. There was a time, not so long ago, when the social sciences in America were long on theories and woefully short on facts, but the last generation of data-gathering has changed all that. Today there is the danger of being submerged by a welter of facts that have little meaning because scholars have failed to erect the intellectual edifice of theory which is so essential to give significance to our data-gathering. If the history of the natural sciences teaches anything it is that theorizing must go hand in hand with fact collecting. It is to be hoped that the vast bodies of social information collected during the last decades will furnish the concrete materials necessary

for a more adequate formulation of the theoretical aspects of sociology.

Uses of Social Inquiry

What, then, can reasonably be expected from existing methods of social inquiry? In the first place, you can attempt the dispassionate analysis of many important social problems, and this in itself is decidedly worth while. Indeed, the historian of the future may come to the conclusion that this was the really great contribution of that heroic attempt of the twentieth century to study human problems scientifically. Even if you do not have the necessary research tools to deal in strictly measurable and objective terms with all phases of a subject, nevertheless, the mere effort to discuss a major social issue without prejudice represents a decided advance over the one-sided propagandistic attitude that has characterized social literature in the past. For example, the studies of race relations have been distinctly helpful in questioning the glib assumption of the superiority of the white race. In like manner a number of farm studies have been useful in bringing to public notice certain pressing problems confronting the agricultural community.

A second important use of social research is its value in introducing new and fresh points of view in the analysis of society. One of its great achievements has been the emphasis which it has placed upon the usual and the commonplace. The human mind tends to seize upon the abnormal and the exceptional, but if sociology teaches us anything it is the importance of simple, everyday processes.

In the third place, there are a whole series of topics that through research methods can be transformed from subjects of heated controversy into matters of verifiable knowledge. Of course, it should be recognized that mere fact gathering has no value unless it is related to significant problems and situations, but with this limitation it can be of great value. What are the standards of living of various classes of Americans? How many people migrate each year from farms to cities and from cities to farms? Is the American village growing or declining? Only through the precise methods of social inquiry can you hope to make these and similar issues matters of authenticated knowledge.

Another value of social research is its use in prediction. Whether you consciously recognize the fact or not, many aspects of human activity are based upon predicting the future, and social science, with the cautions previously set forth, furnishes the best available method for many types of prognostication. It must, of course, be admitted that we live in a highly dynamic world so that it is unsafe to assume that present conditions will continue long in the future. However, by studying current trends it is possible within limits to envisage the immediate future. For instance, recent declines in birth and death rates together with the stoppage of immigration make it reasonable to prophesy with considerable accuracy the probable size of the American nation in the immediate future.

And now, having come to the end of our discussion of some of the problems and difficulties involved in making a social inquiry we cannot do better than to

reiterate that there are no cut and dried rules for carrying on research. It is hoped that the description of actual investigation has suggested the kinds of issues that you should have in mind when undertaking a social study, but remember that no amount of discussion can cover the particular difficulties that will arise in your inquiry. Even a procedure that was eminently successful in one study may not work well when employed under different circumstances. Nothing can take the place of imagination, initiative, common sense and actual experience with the topic you are studying. In a very real sense the way to do research is to do research.

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VAN KLEECK, MARY, "Procedure Followed in Studying the Industrial Representation Plan of the Colorado Fuel and Iron Company," *Journal of Personnel Research,* Vol. IV, Nos. 4-5, 1925, p. 147.

Self-critical analysis of methodology employed in a particular study.

WATSON, JOHN B., *Behaviorism,* New York; W. W. Norton & Company, Inc., 1925.

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WOLMAN, LEO, "Fact Finding," *The New Republic,* Vol. XXXII, No. 407, September 20, 1922, p. 97.

Reflections on aimless fact-gathering growing out of the Coal Commission experience.

Chapter II: CONSULTING AVAILABLE SOURCES

GENERAL DISCUSSION

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An inquiry into the social data available and necessary for social science research in Chicago.

DAVIS, JEROME, "Finding the Truth on Current Issues," *Social Forces,* Vol. IV, No. 4, June, 1926, pp. 729-732.

A discussion of the sources of information on current problems.

WIRTH, LOUIS, "A Bibliography of the Urban Community," in *The City,* by R. E. Park, Ernest W. Burgess, and Roderick D. McKenzie, Chicago; University of Chicago Press, 1925.

Admirable comprehensive bibliography with critical remarks and notes on the nature of sources.

WOODBURY, ROBERT M., *Workers' Health and Safety: A Statistical Program,* New York; The Macmillan Company, 1927.

An appraisal of existing statistics in the fields of industrial safety and health, indicating the gaps and formulating a program for improving conditions.

Libraries

Hutchins, Margaret; Johnson, Alice S.; and Williams, Margaret S., *A Guide to the Use of Libraries,* New York; H. W. Wilson Company, 1929, 4th edition.

A London Bibliography of the Social Sciences, London; London School of Economics and Political Science, 1931-32.

Subject catalogue of several British libraries, chiefly the library of the London School of Economics and Political Science.

United States Catalogue, annual and monthly cumulative book index, New York; H. W. Wilson Company, 1928 and supplements.

Lists all books in print in the U. S., arranged by subject, title and author.

General Bibliographies

There is no single general bibliographic source in the social sciences which is up-to-date. The projected appendix volume of the *Encyclopaedia of the Social Sciences* devoted to bibliographies may remedy this defect.

Grandin, A., *Bibliographie générale des sciences juridiques, politiques, économiques, et sociales de 1800 à 1925-26,* 3 volumes and supplements, 1928-31, Paris; Recueil Sirey, 1926.

Subject guide, French works preponderating.

Index Bibliographicus, edited by Marcel Godet, and Joris Vorstius, Berlin; Walter de Gruyter & Co., 1931, 2nd edition.

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International Committee of Historical Sciences, *International Bibliography of the Historical Sciences,* New York; H. W. Wilson Company, 1926—

The section, "Modern History," contains many valuable suggestions.

League of Nations, *Official Journal,* Boston; World Peace Foundation, 1920—

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Sombart, Werner, "Der Bibliographische und Literarischkritische Apparat der Sozialwissenschaften," in *Archiv für Sozialwissenschaften und Sozialpolitik,* Tübingen; Mohr, 1904, pp. 224-250.

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Weltwirtschaftlisches Archiv, Jena; Gustav Fischer, 1913—

Reviews of literature on various topics in the social sciences, with excellent long reviews of certain works.

WORLD PEACE FOUNDATION. Boston, *Key to League of Nations Documents, 1920-1929,* by Marie J. Carroll, Boston; World Peace Foundation, 1930—

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Good bibliography of a limited field.

BULKELEY, M. E., *Bibliographical Survey of Contemporary Sources for the Economic and Social History of the War,* Oxford; Clarendon Press, 1922.

An annotated survey of literature in the United Kingdom, dealing mainly with government sources.

EATON, ALLEN, AND HARRISON, SHELBY M., *A Bibliography of Social Surveys,* New York; Russell Sage Foundation, 1930.

A survey of surveys.

A Guide to Historical Literature, edited by William H. Allison, Sidney B. Fay, Augustus H. Sheare and Henry R. Shipman, New York; The Macmillan Company, 1931.

Annotated bibliographic guide, historical rather than sociological in emphasis. Cf., however, the chapter on U. S. history for references.

HALL, HUBERT, *British Archives and the Sources for the History of the World War,* London; Humphrey Milford, Oxford University Press, 1925.

See Chapter I on nature and scope of the records of the war; Chapter XVIII on the use of records as historical sources; and Chapter XVII on the materials and forms of the documents. Of interest not only to "archivists" but to students consulting original records.

KUHLMAN, FREDERICK, *Guide to Material on Crime and Criminal Justice,* New York; Social Science Research Council, 1929.

Useful canvass of a particular topic.

Leland, Waldo G., and Mereness, Newton D., *Introduction to the American Official Sources for the Economic and Social History of the World War,* New Haven; Yale University Press, 1926—, for the Carnegie Endowment for International Peace.

A summary of detailed records and official publications of the federal government on American participation in the World War.

Rossi, Diana I. P., *International Finance Source Book,* Chicago; Educational Department of the Investment Bankers' Association, 1928.

Sources of financial information in official documents, bank reports, Chamber of Commerce publications, periodicals, and miscellaneous sources.

Russell Sage Foundation, New York. Library, *Books,* New York; Russell Sage Foundation Library, 1914—

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U. S. Library of Congress, *List of American doctoral dissertations,* 1912—, Washington, D. C.; Government Printing Office, 1913—

Work, M. N., *A Bibliography of the Negro in Africa and America,* New York; H. W. Wilson Company, 1928.

Books, pamphlets, and articles; 17,000 entries. Carefully subdivided and classified with a bibliography of bibliographies on each section, some books annotated; includes even novels with Negro characters.

Historical Methods

Angle, Paul M., "The Minor Collection; A Criticism," *Atlantic Monthly,* April, 1929, Vol. 143, p. 516.

A criticism of purported Lincoln love letters revealing the historical method at its best, and as interesting as a detective story.

Bernheim, Ernst, *Lehrbuch der Historischen Methoden und der Geschichtsphilosophie,* Leipzig; Verlag von Duncker & Humblot, 1903, 3rd ed.

Classic exposition of the methods of historical criticism.

Croce, Benedette, *Theory and History of Historiography,* translated by Douglas Ainslie, London; Geo. G. Harrap & Co., 1921.

Notable work in problems of historical comprehension.

Johnson, Allen, *The Historian and Historical Evidence,* New York; Charles Scribner's Sons, 1926.

Excellent survey of the historical method; see especially the chapters on the nature of historical proof, the use of hypotheses, the assessment of evidence and the technique of historical criticism.

Scott, Ernest F., "The Limitations of the Historical Method," in *Studies in Early Christianity,* edited by S. J. Case, New York; D. Appleton-Century Company, 1928.

The historical method and the student of Christianity.

Seignobos, Charles, *La Méthode historique appliquée aux Sciences Sociales,* Paris; Felix Alcan, 1901.

Documentary criticism and the social historian.

Vincent, John M., *Historical Research,* New York; Henry Holt & Company, Inc., 1911.

A handbook of methods of historical criticism. See especially chapter on the newspaper as a source.

Encyclopedias and Other Reference Books

Cyclopedia of American Government, edited by A. C. McLaughlin and A. B. Hart, New York; D. Appleton-Century Company, 1914, 3 volumes.

Dictionary of American Biography, edited by Allen Johnson for American Council of Learned Societies, New York; Charles Scribner's Sons, 1928—

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Elster, Ludwig, *Wörterbuch der Volkswirtschaft,* Jena; Gustav Fischer, 1911-31.

Encyclopædia Britannica, Cambridge; Cambridge University Press, 1929, 14th edition; 1910-11, 11th edition.

Encyclopaedia of the Social Sciences, edited by E. R. A. Seligman, New York; The Macmillan Company, 1930—

Expert articles "free of scientific jargon," excellent résumés of field of social sciences with bibliographies appended to most articles. A special volume of bibliography is promised when the work is completed.

Handbuch der Finanzwissenschaft, Tübingen; Mohr, 1929.

Handwörterbuch der Staatswissenschaften, Jena; Gustav Fischer, 1923-28, 8 volumes.

Most comprehensive German work. Considered the finest political science encyclopedia in any language. Long articles, bibliographies.

La Grande Encyclopédie, Paris; H. Lamirault et Cie, 1902.

Mudge, Isadore, *Guide to Reference Books,* with supplements, Chicago; American Library Association, 1929—

Indispensable guide to reference books.

New International Encyclopedia, and supplements, New York; Dodd, Mead & Company, Inc., 1922-24, 2nd edition.

Nuova Enciclopedia Italiana, Torino; Unione tipog., 1875-88, 6th edition.

PALGRAVE, SIR ROBERT, *Palgrave's Dictionary of Political Economy,* edited by Henry Higgs, London; The Macmillan Company, 1923-26, 3 volumes.

Who's Who in America, Chicago; A. N. Marquis Co.

PERIODICAL INDEXES

AYER, N. W., *N. W. Ayer & Son's Directory of Newspapers and Periodicals,* Philadelphia; N. W. Ayer & Son (firm of newspaper advertising agents, Philadelphia), 1880—

Bibliographie der Deutschen Rezensionen, Leipzig; Dietrich, 1901—

Bibliographie der Sozialwissenschaften, Berlin; Reimar Hobbing, 1906—

Book Review Digest, New York; H. W. Wilson Company, 1905—

Index to reviews of new books on variety of subjects in 50 English and American periodicals.

Bulletin Bibliographique de Documentation Internationale Contemporaine, Paris; Les Presses Universitaires de France, 1926—

Industrial Arts Index, New York; H. W. Wilson Company, 1913—

Subject index to a selected list of engineering and trade periodicals; later volumes include many important sociological periodicals.

International Index to Periodicals (formerly supplement to *Readers' Guide*), New York; H. W. Wilson Company, 1907—

Devoted to humanities and science. Well indexed, like *Readers' Guide.* Includes constantly expanding number of foreign periodicals.

LIPPMANN, WALTER, AND MERZ, CHARLES, "Test of the News," *The New Republic,* Vol. XXIII, supplement, August 4, 1920, pp. 1-42.

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A scathing documented analysis of the failure to report correctly news from Russia.

New York Times Index, New York; New York Times, 1913—

Newspaper index arranged according to subjects.

Poole's Index to Periodical Literature, Boston; Houghton Mifflin Company, 1802-1907.

Important index covering an unusually long period.

Psychological Index, Princeton; Psychological Review Co., 1894—

Annual bibliography of the literature of psychology.

Public Affairs Information Service Bulletin, New York; H. W. Wilson Company, 1920—

Important publications relating to public affairs; also typewritten material such as bibliographies and digests, legislation, periodicals, books; arranged by subjects; covers 900 periodicals, mostly in English, but some foreign countries included. Emphasis on practical affairs and contemporary topics; news digests. Cumulated annually.

Readers' Guide to Periodical Literature, New York; H. W. Wilson Company, 1900—

General periodicals; index of articles under author, subject, title.

Rushmore, E. M. (ed.), *Social Workers' Guide to the Serial Publications of Representative Social Agencies,* New York; Russell Sage Foundation, 1921.

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Social Science Abstracts, Social Science Research Council, New York; Social Science Abstracts, Inc., 1929-32.

Three thousand periodicals, American and foreign, articles summarized. (Discontinued in 1932.)

Subject-Index to Periodicals, London; Library Association, 1915—

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The Times, London, *The Official Index to the Times,* London; The Times Publishing Co., 1914—

Periodicals

The following periodicals may all be found in the *Union List of Serials in Libraries of the United States and Canada* (New York; H. W. Wilson Company, 1927 and supplements). Lists periodical holdings of various libraries.

American Anthropologist.

American Economic Review, quarterly.

Reviews and abstracts and an annual list of doctoral dissertations.

American Historical Review.

American Labor Legislation Review.

American Journal of Abnormal and Social Psychology.

American Journal of Sociology, bimonthly.

Abstracts of recent literature, doctoral dissertations, etc.

American Political Science Review.

Annals of the American Academy of Political and Social Science.
Archiv für Sozialwissenschaft und Sozialpolitik.

Bank Publications

Cleveland Trust Company.
Federal Reserve Bulletin.
National City Bank.

Bulletin de l'Institut International de Statistique.
Contemporary Review (English).
Current History.
Economic Journal (London), quarterly.
Economic Review.
Economics, published by London School of Economics.
The Family.
Foreign Affairs.
International Journal of Ethics.
International Labor Review.
Journal of the American Institute of Criminal Law and Criminology.
Journal of American Statistical Association.
Journal of Educational Sociology.
Journal of Philosophy, Psychology and Scientific Methods.
Journal of Political Economy.
Journal of the Royal Statistical Society.

Labor Publications

Advance of the Amalgamated Clothing Workers.
American Federationist.
Federated Press Labor Letter.
Labor (organ of the Railroad brotherhoods).
Labor Age.

London Nation and Atheneum.
Mental Hygiene.
Monthly Labor Review, published by Bureau of Labor Statistics.
National Conference of Social Work Reports.
Quarterly Journal of Economics.
Review of the Soviet Union.
Revue des Deux Mondes.
Revue Économique Internationale.
Revue Internationale de Sociologie.

Schmollers Jahrbuch.

Social Forces.

Sociological Review (London).

Sociology and Social Research.

Survey of Current Business.

Survey and Survey Graphic.

TRADE JOURNALS

Coal Age.
Industrial Management.
Iron Age.
Printers' Ink Monthly.

Yale Review.

Zeitschrift für Voelkerpsychologie und Soziologie.

YEARBOOKS

American Labor Yearbook, Labor Research Department of Rand School of Social Science, New York; Rand School Press, 1916—

Industrial and social conditions, trade union organizations, strikes, labor legislation, civil liberties, court decisions, workers' education, cooperation, labor abroad, new books.

American Yearbook, New York; Doubleday, Doran & Company, Inc.

Embodies lengthy signed articles by specialists.

Labour Yearbook, London; Labour Publications Department, 1916—

Social Progress, New York; The Arbitrator, 1925.

A handbook of the liberal movement.

Social Work Yearbook, New York; Russell Sage Foundation, 1929—

"Record of organized efforts in the United States to deal with social problems."

Statesmen's Yearbook, London; The Macmillan Company, 1864—

Statistical and historical annual of the states of the world: statistical, economic information, diplomatic and governmental developments, religion, area and population, education, justice and crime, labor and employment, finance, defence, production, industry, commerce, shipping, navigation, transportation, communications, railroads, money, weights and measures of each country.

World Almanac, New York; New York World Telegram, 1868—

Yearbook of American Churches, New York; Round Table Press, Inc., 1916—

Government Sources

Government sources consist of primary documents connected with the government's own administration, and also statistics, investigations, publications put out by the governments of the world for various other purposes. This distinction is not enforced in our lists, but an indication is given of the immense amount of material in governmental hands, both American and foreign.

Fry, C. Luther, "Making Use of Census Data," *Journal of American Statistical Association,* Vol. XXV, new series No. 170, June, 1930, pp. 129-138.

An examination of extended use of census data.

Schmeckebier, Laurence F., *The Statistical Work of the National Government,* Baltimore; The Johns Hopkins Press, 1925.

Careful survey of what the national government has collected in statistical information. Useful guide to labyrinth of government statistics. Some of the departmental studies mentioned are given below.

Stewart, P. W., *Market Data Handbook,* Washington, D. C.; Government Printing Office, 1929.

Prepared for the Bureau of Foreign and Domestic Commerce. Contains invaluable statistical information about the United States by counties.

U. S. Bureau of the Census, *Biennial Census of Manufactures,* Washington, D. C.; Government Printing Office, 1924—

U. S. Bureau of the Census, *Fifteenth Census of the United States,* Washington, D. C.; Government Printing Office, 1930—

The Bureau has also published decennial reports since 1790.

U. S. Bureau of the Census, *Religious Bodies,* Washington, D. C.; Government Printing Office, 1906—

U. S. Bureau of Foreign and Domestic Commerce, *Commerce Yearbook,* Washington, D. C.; Government Printing Office, 1923—

U. S. Bureau of Foreign and Domestic Commerce, *Statistical Abstract of the United States,* Washington, D. C.; Government Printing Office, 1879—

U. S. Bureau of Immigration, *Annual Report,* Washington, D. C.; Government Printing Office, 1892—

U. S. Bureau of Labor Statistics, *Handbook of Labor Statistics,* Washington, D. C.; Government Printing Office, 1927—

U. S. Congress, *Congressional Record,* Washington, D. C.; Government Printing Office, 1874—

Verbatim reports of proceedings.

U. S. Department of Agriculture, *Yearbook of Agriculture,* Washington, D. C.; Government Printing Office, 1895—

U. S. Department of Labor.

There are many valuable publications of the Women's Bureau and of the Children's Bureau which are indispensable for current information on industrial relations.

U. S. Federal Reserve Board, *Federal Reserve Bulletin,* Washington, D. C.; Government Printing Office, 1915—

Very useful for price statistics.

U. S. Federal Trade Commission, *Annual Reports,* Washington, D. C.; Government Printing Office, 1915—

U. S. Interstate Commerce Commission, *Annual Report on the Statistics of Railways in the United States,* Washington, D. C.; Government Printing Office, 1889—

Gives figures on railroads and railroad labor.

U. S. Office of Education, *Bulletin,* Washington, D. C.; Government Printing Office, 1906—

U. S. Office of Education, *Reports of the Commissioner,* Washington, D. C.; Government Printing Office, 1868—

U. S. Public Health Service, *Public Health Reports,* Washington, D. C.; Government Printing Office, 1878—

U. S. Superintendent of Documents, *Catalogue of the Public Documents of Congress and of all Departments,* Washington, D. C.; Government Printing Office, 1896—

U. S. Superintendent of Documents, *Monthly Catalogue of U. S. Public Documents,* Washington, D. C.; Government Printing Office, 1895—

U. S. Superintendent of Documents, *Price Lists,* Washington, D. C.; Government Printing Office.

Obtainable from Superintendent of Documents. Lists government publications (chiefly pamphlets) not included in general indexes.

Other sources such as the Annual Reports of the U. S. Comptroller of Currency, Reports of the Bureau of Mines, Reports of the Geological Survey, Reports of the Smithsonian Institution, Reports of the Bureau of Internal Revenue, etc., have been used by recent studies.

STATE AND LOCAL GOVERNMENT DATA

Dubois, Florence, *Guide to Statistics of Social Welfare in New York City,* New York; Welfare Council of New York City, 1930.

Sources of information on various topics, with complete list of agencies in New York, pp. 273-284.

Hasse, A. R., *Index of Economic Material in Documents of the States of the United States,* prepared for the Department of Economics and

Sociology of the Carnegie Institution of Washington; 13 volumes on as many states. Washington, D. C.; Carnegie Institution, 1907-22.

U. S. Library of Congress, Division of Documents, *Monthly Check-List of State Publications,* Washington, D. C.; Government Printing Office, 1910—

Administrative departments and commissions, such as reports of tax commissioner, education reports, highway department reports, health department reports, bank commissioners' reports, welfare department statistics.

Annual reports of such municipal agencies as health department, police department, school census, tenement house department, public welfare department, hospitals, etc.

County records such as tax receipt materials, case records of superintendents of public welfare, published reports of criminal justice, county supervisors' reports, etc.

Records of courts, particularly the more advanced juvenile courts, parole boards, public school records, birth and death certificates, coroners' certificates, city ordinances, and offices of various city officials.

State Census—such as New York State's.

State Labor Departments—such as the New York State Department of Labor, which publishes special labor research reports, as well as a monthly Industrial Bulletin.

FOREIGN GOVERNMENT DATA

American Library in Paris, Inc., *Official Publications of European Governments,* Paris; American Library in Paris, 1926.

Childs, James B., *An account of government document bibliography in United States and elsewhere,* Washington, D. C.; Government Printing Office, 1927.

List of serial publications of foreign governments, New York; H. W. Wilson Company, 1932.

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Annuaire Générale de la France, Paris; Larousse, 1919—

Australia. Bureau of Census and Statistics, *Official Yearbook,* Melbourne; 1908—

Austria. Bundesamt für Statistik, *Oesterreichisches Statistisches Handbuch,* Vienna; 1920—

Canada. Bureau of Statistics, *Canada Yearbook,* Ottawa; 1906—

China Yearbook, London; George Routledge & Sons, 1921—

France. Bureau de la Statistique Générale, *Annuaire Statistique de la France,* Paris; 1878—

GERMANY. STATISTISCHES REICHSAMT, *Statistisches Jahrbuch für das Deutsche Reich,* Berlin; Reimar Hobbing, 1880—

GREAT BRITAIN. BOARD OF TRADE, *Statistical Abstract for the Principal and Other Foreign Countries,* London; Eyre & Spottis, 1874—

GREAT BRITAIN. BOARD OF TRADE, *Statistical Abstract for the United Kingdom,* London; His Majesty's Stationery Office, 1840—

GREAT BRITAIN. STATIONERY OFFICE, *Consolidated List of Government Publications,* London; His Majesty's Stationery Office, 1922—

South American Handbook, London; South American Publications, 1924—

Soviet Union Yearbook, London; George Allen & Unwin, 1925—

UNPUBLISHED SOURCES

AMERICAN COUNCIL OF LEARNED SOCIETIES, *Research in the Humanistic and Social Sciences,* by Frederick Austin Ogg, New York; D. Appleton-Century Company, 1928.

Contains a complete list of foundations and research organizations, private and public, in the various social sciences.

CARPENTER, NILES, "Research Resources of a Typical American City as Exemplified by the City of Buffalo," *Proceedings of the American Sociological Society,* Vol. XX; reprinted in *American Journal of Sociology,* Vol. XXXII, No. 1, part 2, July, 1926, pp. 22-225.

Survey of the research data available in the Buffalo area, concerning vital statistics, ecological and economic factors, and pathological factors.

DENT, A. G. H., "Economic Research Work," *Weltwirtschaftliches Archiv,* Vol. XXXI, 1930, pp. 545-590.

The economic services and organizations that are engaged in studying European business conditions and the application of economic research to engineering, electrical, and associated industries in Great Britain and the United States.

Chapter III: DIRECT OBSERVATION

BEARD, A. S., "Educability of Observation and Report," Studies in Observational Learning under the direction of W. F. Book, Indiana University, 1922, Bloomington, Indiana; *Bulletin of Extension Division,* Indiana University, Vol. VII, No. 12, August, 1922.

Experiments in training groups in observation.

CHAPIN, F. STUART, *Field Work and Social Research,* New York; D. Appleton-Century Company, 1920.

Includes a valuable discussion of use of schedules and score cards, particularly in housing surveys.

CLARKE, EDWIN L., *The Art of Straight Thinking,* A Primer of Scientific Method for Social Inquiry, New York; D. Appleton-Century Company, 1929.

Logic applied in social investigation; see especially Chapter V on observation and its training.

ELMER, MANUEL C., *Technique of Social Surveys,* Los Angeles; Jesse Ray Miller, 1927, Chapters XIV, XV.

Use of score cards to standardize observation.

HEALY, WILLIAM, *The Individual Delinquent,* Boston; Little, Brown & Company, 1915.

See Book I, Chapter II on points of view, and Chapters V to IX on methods, especially pages 53-65 for an extensive schedule to guide observation and study of delinquents.

JEVONS, WILLIAM B., *Principles of Science,* New York; The Macmillan Company, 1877, Chapter XVIII.

On observation and its logical pitfalls.

LIBBY, WALTER, *An Introduction to the History of Science,* Boston; Houghton Mifflin Company, 1917, Chapter XIV.

The story of the discovery of Neptune, demonstrating the value of careful observation.

LINDEMAN, EDUARD C., *Social Discovery,* New York; New Republic, Inc., 1924, Chapter VIII.

Formulates technique of "participant observer."

LUNDBERG, GEORGE A., *Social Research,* New York; Longmans, Green & Company, 1929.

Chapter III deals with the difficulties of objective observation, and Chapter VI with the schedule as an instrument of observation.

MÜNSTERBERG, HUGO, *On the Witness Stand,* New York; Doubleday Doran & Company, Inc., 1908.

Examines the unreliability of witnesses, with interesting illustrations.

OGBURN, WILLIAM F., "Bias, Psychoanalysis and the Subjective in Relation to the Social Sciences," *Proceedings American Sociological Society,* Vol. XVII, 1922, p. 62.

Knowledge of our biases, while not positively increasing the scientific output, ought to reduce the amount of unscientific work now turned out.

OTTO, M. C., "Testimony and Human Nature," *Journal of the American Institute of Criminal Law and Criminology,* Vol. IX, 1918, pp. 98-104.

An experiment illustrating the unreliability of observation.

PARK, ROBERT E.; BURGESS, ERNEST W.; AND MCKENZIE, RODERICK D., *The City*, Chapter II, "The Growth of the City," by Ernest W. Burgess, Chicago; University of Chicago Press, 1925.

Shows the use of maps as aids in observation.

SHERMAN, MANDEL, "The Differentiation of Emotional Responses in Infants. I. Judgments of emotional responses from motion picture views and from actual observation," *Journal of Comparative Psychology*, Vol. VII, No. 2, 1927, pp. 265-284.

Presents experiments showing disagreement among observers as to emotional patterns in infants.

WEBB, BEATRICE, *My Apprenticeship*, London; Longmans, Green & Company, 1926.

Throughout the latter part of this book runs the story of how Mrs. Webb learned to observe social institutions. See also Appendix A, pp. 417-422, on Personal Observation and Statistical Enquiry and their interdependence.

WOODWORTH, ROBERT S., "Psychological Experience with the Interview," *Journal of Personnel Research*, Vol. IV, Nos. 4-5, 1925, pp. 162-165.

Similar to Otto's experiment, illustrating the fallibility of observation.

Chapter IV: THE INTERVIEW

AMERICAN ASSOCIATION FOR SOCIAL WORKERS, *Interviews*, Studies in the Practice of Social Work #1, New York; American Association of Social Workers.

A study in analysis and recording of case work interviews. A number of interviews and their techniques are presented in detail.

BAIN, READ, "An Attitude on Attitude Research," *American Journal of Sociology*, Vol. XXXIII, No. 6, May, 1928, pp. 940-957.

Conflicting views of "What is an attitude?" suggest that study of behavior should replace opinions and attitudes.

BAIN, READ, "The Impersonal Confession and Social Research," *Journal of Applied Sociology*, May-June, 1925, p. 359.

"Impersonal confession" is a valuable type of interview for obtaining source material.

BINGHAM, WALTER VAN DYKE, AND MOORE, BRUCE VICTOR, *How to Interview*, New York; Harper & Brothers, 1931.

A comprehensive treatment of the whole subject of interviewing, with a number of experiments on its effectiveness, and a list of detailed instructions for perfecting the interview.

BOGARDUS, EMORY S., *The New Social Research,* Los Angeles; Jesse Ray Miller, 1926.

The use of research interview in a race relations survey as well as its application to the collection of life history data is discussed.

CAVAN, R. S., "Interviewing for Life-History Material," *American Journal of Sociology,* Vol. XXXV, No. 1, July, 1929, p. 100.

Summary of the literature on interviewing for life histories, copious bibliography and classification of the field and its methods.

EIGELBERNER, J., *Investigation of Business Problems,* New York; McGraw-Hill Book Co., Inc., 1926.

A common-sense approach to the interview.

GIBBS, PHILIP H., *Adventures in Journalism,* London; Wm. Heinemann, 1923, pp. 46 f.

Some interesting interview experiences, especially one with the Rector of Copenhagen University which revealed the dubiousness of Cook's claim to discovery of the North Pole.

HAMILTON, E. R., *The Art of Interrogation,* New York; Harcourt, Brace & Company, 1929.

The nature of questions and questioning and their logical implications.

HEALY, WILLIAM, *The Individual Delinquent,* Boston; Little, Brown & Company, 1915.

See the detailed schedule to be used as guide in interviewing delinquents, covering mental testing procedures, psychological interviews, case history, family records, etc.

KRUEGER, E. T., "Technique of Securing Life History Documents," *Journal of Applied Sociology,* March-April, 1925.

The basis of the interviewer's method in getting life history documents.

LASSWELL, HAROLD A., *Psychopathology and Politics,* Chicago; University of Chicago Press, 1930.

Develops the view that our knowledge of politics would be greatly enhanced by intimate psychoanalytic interviewing of political personalities and studies of case records.

MARCOSSON, ISAAC F., *Adventures in Interviewing,* London; John Lane, 1920.

A record of interviews with the great of our times from Woodrow Wilson to Jack London, with a chapter on "The Art of Interviewing."

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A psychological analysis of radicalism.

Chapter X: QUANTITATIVE ANALYSIS

BORING, EDWIN G., "The A Priori Use of the Gaussian Law," *Science,* new series Vol. LII, No. 1336, August 6, 1920, pp. 129-130.

Misapplication of the normal curve in psychological measurements.

BOWLEY, ARTHUR M., *Elements of Statistics,* London; P. S. King & Son, 1926.

An excellent advanced treatment of statistical methods, with particular applications to the social sciences.

BOWLEY, ARTHUR M., *Introduction to the Nature and Purpose of the Measurement of Social Phenomena,* London; P. S. King & Son, 1915.

The uses of social measurement and the nature of classification.

BURGESS, ERNEST W., "Is Prediction Feasible in Social Work? An Inquiry based upon Sociological Study of Parole Records," *Social Forces,* Vol. VII, No. 4, June, 1929, p. 533.

An examination of parole records and an attempt to generalize from them to predict probability of parole violation in the future.

CANADA. BUREAU OF STATISTICS, *Illiteracy and School Attendance in Canada,* Ottawa, F. A. Acland, 1926.

The first 28 pages analyze the accuracy and adequacy of the Census methods of obtaining illiteracy figures.

CHADDOCK, ROBERT E., *Principles and Methods of Statistics,* New York; Houghton Mifflin Company, 1925.

Standard textbook of statistical methods, with detailed applications to social research.

CHAPIN, F. STUART, *Field Work and Social Research,* New York; D. Appleton-Century Company, 1920, Chapter VIII.

Deals with the editing, classifying and tabulating of field work data.

CHAPIN, F. STUART, "The Statistical Definition of a Societal Variable," *American Journal of Sociology,* Vol. XXX, No. 2, September, 1924, p. 154.

The concept "over-crowding" is statistically defined.

CRUM, W. L., "The Use of the Median in Determining Seasonal Variations," *Journal of American Statistical Association,* Vol. XVIII, new series No. 141, March, 1923, pp. 607-614.

Examination of basis for a special use of median in economic statistics.

EZEKIEL, MORDECAI, *Methods of Correlation Analysis,* New York; John Wiley & Sons, Inc., 1931.

Exposition of the methods of correlation applied to many problems.

FERGER, WIRTH F., "The Nature and Use of the Harmonic Mean," *Journal American Statistical Association,* Vol. XXVI, new series No. 173, March, 1931, pp. 36-40.

Clear explanation of the meaning and use of the harmonic mean.

FLORENCE, P. SARGENT, *The Statistical Method in Economics and Political Science,* New York; Harcourt, Brace & Company, 1929.

Excellent systematic treatment of the quantitative approach and its rationale.

GEHLKE, CHARLES E., "The Use and Limitations of Statistics in Sociological Research," *Proceedings American Sociological Society,* Vol. XXI, 1926, p. 141.

What statistics can and cannot do.

HARTSHORNE, HUGH; MAY, MARK A.; AND SHUTTLEWORTH, FRANK K., *Studies in the Organization of Character,* New York; The Macmillan Company, 1930.

Treats of statistical methods used in the study of character.

HOUSE, FLOYD N., "The Limitations of Economic Analysis," *American Journal of Sociology,* Vol. XXXII, No. 6, May, 1927, p. 921.

Quantitative methods of economics cannot fully probe sociological problems which are in terms of actual processes. Realistic description of all forces at work necessary.

LUNDBERG, GEORGE A., *Social Research,* New York; Longmans, Green & Company, 1929, Chapter VIII.

Although confining case studies to social case work, this chapter discusses the scientific uses of statistics in place of the crude methods of case work.

MCKENZIE, R. D., "The Ecological Approach to the Study of the Human Community," *American Journal of Sociology,* Vol. XXX, No. 3, November, 1924, p. 289.

The spatial and temporal relations of people as affected by the selective, distributive and accommodative forces of the environment, especially the effects of food supply and distribution upon human configurations.

MILLS, FREDERICK A., "On Measurement in Economics" in R. G. Tugwell (ed.), *The Trend of Economics,* New York; Alfred A. Knopf, 1924.

Treats of the descriptive and inductive phases of statistical methods and the limitations to generalization.

MILLS, FREDERICK C., *Statistical Methods,* New York; Henry Holt & Co., Inc., 1928.

Statistical methods for use in economics and business.

MITCHELL, WESLEY C., "Quantitative Analysis in Economic Theory," *American Economic Review,* Vol. XV, No. 1, March, 1925, p. 1.

Quantitative realistic analysis cannot remain within the confines of qualitative deductive theory.

NATIONAL BUREAU OF ECONOMIC RESEARCH, *Business Cycles and Unemployment,* New York; McGraw-Hill Book Company, Inc., 1924.

One of the finest combinations of realistic statistical analysis with deductive theory. See especially the chapter on "The Contribution of Statistics," pp. 189-360.

RICE, STUART A., *Quantitative Methods in Politics,* New York; Alfred A. Knopf, 1928.

One of the more vocal pleas for the use of quantitative methods, and its justification in social science.

RICE, STUART A. (ed.), *Statistics in the Social Studies,* Philadelphia; University of Pennsylvania Press, 1930.

Essays by various authors on the uses of statistics. Note especially Marshall's article dealing with attempts to apply statistics to evaluating the work of courts.

ROSS, FRANK ALEXANDER, "Ecology and the Statistical Method," *American Journal of Sociology,* Vol. XXXVIII, No. 4, January, 1933, pp. 507-522.

Reveals basic statistical defects in current "ecological" studies.

SECRIST, HORACE, *Introduction to Statistical Methods,* New York; The Macmillan Company, 1921.

Contains especially good treatment of classification and tabulation.

THOMAS, DOROTHY S., *Social Aspects of the Business Cycle,* New York; E. P. Dutton & Co., Inc., 1926.

A study in correlation of social factors with the business cycle.

THOMAS, DOROTHY S., "Statistics in Social Research," *American Journal of Sociology,* Vol. XXXV, No. 1, July, 1929.

Discusses working limitations imposed by using statistics in her study illustrating the numerous compromises with the logical character of statistical implications made necessary by adaptation of quantitative methods to social data.

Three Reviews of Methods in Social Science, by Walton Hamilton, A. B. Wolfe and O. H. Taylor, *Journal of Political Economy,* Vol. XXXIX, No. 5, October, 1931, pp. 633-645.

Devastating critique of exclusive use of quantitative "scientific" method.

WATSON, GOODWIN B., *Experimentation and Measurement in Religious Education,* New York; The Association Press, 1927, pp. 55 f.

Treats of the uses of statistics in measurement and test work.

WILSON, EDWIN B., "Mathematics and Statistics," *Journal of American Statistical Association,* Vol. XXV, new series No. 169, March, 1930, pp. 1 f.

Presidential address to American Statistical Association on the relations between mathematics and statistics.

WOODBURY, ROBERT M., *Causal Factors in Infant Mortality,* Washington, D. C.; U. S. Children's Bureau Publications No. 142, 1925.

The uses of partial correlation in isolating the many factors entering into infant mortality.

YULE, G. UDNY, *Introduction to the Theory of Statistics,* London; C. Griffin & Company, 1922.

A standard source book on statistical methods.

Chapter XI: WRITING THE REPORT

AYRES, LEONARD P., "The Dilemma of the New Statistics," Presidential address at 88th Annual Convention of the American Statistical Association, *Journal of American Statistical Association,* Vol. XXII, new series No. 157, March, 1927.

A plea that statisticians make themselves understood.

BENNETT, ARNOLD, *Literary Taste and How to Form It,* New York; Doubleday, Doran & Company, Inc., 1910, p. 46.

Discusses style as an integral part of content in writing.

BINKLEY, ROBERT C., *Methods of Reproducing Research Materials,* Ann Arbor, Mich.; Edwards Bros., 1931.

A survey of costs and methods of reproducing research articles and materials.

BURGESS, GELETT, *Are You a Bromide?* New York; B. W. Huebsch, Inc., 1906.

The classic antidote for hackneyed expression.

Century Handbook of Writing, New York; D. Appleton-Century Company, 1923.

A valuable source book.

DRACHMAN, JULIUS M., *Studies in the Literature of Natural Science,* New York; The Macmillan Company, 1926.

A number of studies of famous works in natural science, revealing that they need not necessarily be dry-as-dust.

FISHER, IRVING, *The Making of Index Numbers,* New York; Houghton Mifflin Company, 1922.

Professor Fisher has so written his book that many different types of readers may use it, skipping the—to them—unessential parts.

FOWLER, G. AND H. W., *Dictionary of Modern English Usage,* New York; Oxford University Press, American Branch, 1926.

An indispensable guide to good usage, with much witty advice on the technical side of writing.

LOOMIS, R. AND S., *The Art of Writing Prose,* New York; Richard R. Smith, 1930.

Does not have the research worker especially in mind, but useful nevertheless.

MANLY, JOHN M., AND RICKERT, EDITH, *The Writing of English,* New York; Henry Holt & Co., Inc., 1923.

A textbook on composition, with illustrations from contemporary writing.

OGBURN, WILLIAM F., "The Folkways of a Scientific Sociology," *Proceedings American Sociological Society,* Vol. XXIV, 1929, pp. 1-11.

Predicts that sociological investigations of the future will be divorced from journalism, ethics, politics, philosophy, etc.

OGDEN, C. K., AND RICHARDS, I., *The Meaning of Meaning,* New York; Harcourt, Brace & Company, 1923.

The borderland of psychology, logic and language explored, with suggestions as to the more critical use of words.

QUILLER-COUCH, ARTHUR, *On the Art of Writing,* Cambridge, England; The University Press, 1923.

Persuasive lectures on the art of writing.

RICKARD, T. A., *Technical Writing,* New York; John Wiley & Sons, Inc., 1920.

An engineering magazine editor's digest of the common faults of style found in manuscripts.

ROBINSON, JAMES H., *The Humanizing of Knowledge,* New York; Doubleday, Doran & Company, Inc., 1923.

Urges writing simply and interestingly for educating many. Pleas for democratizing education.

SMITH, BERTHA W., AND LINCOLN, VIRGINIA C., *The Writing Art,* Boston; Houghton Mifflin Company, 1931.

Authorship described by some great writers themselves in an anthology.

STAMP, SIR JOSIAH, *Criticism* and other addresses, London; Ernest Benn, 1931.

Essays of a distinguished economist. The first two particularly applicable to the student.

Style Manual of the Government Printing Office, Washington, D. C.; Government Printing Office, October, 1924.

Notes on the form of manuscripts submitted to the Government Printing Office.

VAN KLEECK, MARY, "Procedure followed in Studying the Industrial Representation Plan of the Colorado Fuel and Iron Company," *Journal of Personnel Research,* Vol. IV, Nos. 4-5, 1925.

In her consideration of research Miss Van Kleeck urges the cultivation of the sharpness and accuracy and vividness of statement of the literary artist.

Chapter XII: DISSEMINATING THE FINDINGS

BEARD, CHARLES A., *A Charter for the Social Sciences in the Schools,* New York; Charles Scribner's Sons, 1932.

Beard examines the nature of social disciplines, requirements of social realities, the climate of American ideas, and the framework of programs, requirements of teaching and learning process in the supreme purpose of civic instruction—the creation of rich and many-sided personalities.

DEWEY, JOHN, "Social Science and Social Control," *The New Republic,* Vol. LXVII, No. 869, July 29, 1931, pp. 276-278.

Social science cannot be mere piling up of facts without use.

DUFFUS, ROBERT L., *Mastering a Metropolis,* New York; Harper & Brothers, 1930, Foreword.

Frederick A. Delano, Chairman Regional Plan, shows the need for popularizing the regional survey of New York.

FAGG, C. C., AND HUTCHINGS, E. G., *An Introduction to Regional Surveying,* Cambridge; Cambridge University Press, 1930.

Survey methods and exhibitions of the English school.

FLYNN, JOHN T., "Edward L. Bernays, The Science of Ballyhoo," *Atlantic Monthly Magazine,* Vol. CXXXXIX, May, 1932, pp. 562 f.

An interview with one of the "public relations counsels," giving an insight into his methods.

HARRISON, SHELBY M., "In Lincoln's Home Town," *The Survey,* Vol. XXXVII, February 3, 1917.

How the Springfield Survey worked; the elements of the survey's attempt to get cooperation.

JUSSERAND, JEAN J.; ABBOTT, WILBUR C.; COLBY, CHARLES W.; AND BASSETT, JOHN S., *The Writing of History,* New York; Charles Scribner's Sons, 1926.

A committee of the American Historical Association points out the poor quality of much present-day historical writing.

KARPF, FAY B., "Sociology, Sociological Research and the Interest in Applications," *Social Forces,* Vol. VI, No. 4, June, 1928, p. 518.

The need for cooperation between social work, which has hitherto prided itself on aloofness from theory, and sociology, which has sought to remain apart from practical applications.

MARCOSSON, ISAAC F., *Adventures in Interviewing,* New York; John Lane Company, 1920, Chapter XV.

A concrete illustration of book publicity.

MOLEY, RAYMOND, *A Review of the Surveys of the Cleveland Foundation,* Cleveland; The Cleveland Foundation, 1928.

The work of the Cleveland Foundation, particularly the activities following each survey in order to get community cooperation.

OGBURN, WILLIAM F., "The Folkways of a Scientific Sociology," *Proceedings of American Sociological Society,* Vol. XXIV, 1929, pp. 1-11.

The view that science is interested in discovering knowledge, not in alleviating ills.

"Round Table of the Technique of the Social Survey," *Proceedings American Sociological Society,* Vol. XXII, 1927, pp. 224 f.

A discussion of the methods and technique of the survey and its attempts to disseminate findings.

ROUTZAHN, EVART G. AND MARY S., *The A B C of Exhibit Planning,* New York; Russell Sage Foundation, 1918.

The making of exhibits to display survey findings.

ROUTZAHN, EVART G. AND MARY S., *Publicity for Social Work,* New York; Russell Sage Foundation, 1928.

Publicity aids in campaigns and survey advertising thoroughly discussed.

SHANTON, HERBERT NEWHARD, *The Practical Application of Sociology,* New York; Columbia University Press, 1927.

Treats of the practical objectives of sociology and with ways and means of achieving them.

SYMES, LILLIAN, "The Great Fact-Finding Farce," *Harper's Monthly Magazine,* Vol. 164, February, 1932, p. 354.

Fact-finding should not become a substitute for fact-using.

Chapter XIII: POSSIBILITIES AND LIMITATIONS OF SOCIAL RESEARCH

BEARD, CHARLES A., *A Charter for the Social Sciences in the Schools,* New York; Charles Scribner's Sons, 1932.

The basic problems underlying the relations of social science teachers and the educational process in a changing world.

DEWEY, JOHN, "Social Science and Social Control," *The New Republic,* Vol. LXVII, No. 869, July 29, 1931, p. 276.

A fundamental appraisal of the relation of fact-finding to social planning.

FLORENCE, PHILIP SARGENT, *Sociology and Sin,* New York; W. W. Norton & Company, Inc., 1929.

A plea that social scientists avoid propaganda and uplift and confine themselves to the finding of an independent body of knowledge.

HYDE, LAWRENCE, "Can Science Control Life?" *Atlantic Monthly Magazine,* Vol. CXLVI, August, 1930, p. 242.

A skeptical view of some of the dangers attending sociological research.

LIPPMANN, WALTER, "Flight from Reality," *New York Herald Tribune,* May 25, 1932, p. 21.

A penetrating view of the political and psychological imponderables in social planning and control.

MCDOUGALL, WILLIAM, *World Chaos,* New York; Covici-Friede, Inc., 1932.

A famous psychologist looks to the development of social science for a way out.

MACIVER, ROBERT M., "Is Sociology a Natural Science?" *Proceedings American Sociological Society,* Vol. XXV, 1930, pp. 5-36.

Sociology cannot depend on a mechanical study of external indices but involves a fresh understanding of and insight into social relationships.

MANNHEIM, KARL, Review of *Methods in Social Science, American Journal of Sociology,* Vol. XXXVIII, No. 2, September, 1932, p. 275.

A critical view of the aims and methods of quantitative American sociology.

OGBURN, WILLIAM F., "The Folkways of a Scientific Sociology," *Proceedings American Sociological Society,* Vol. XXIV, 1929, pp. 1-11.

The future of American quantitative realistic sociology, purged of moralistic and sensational aims.

PARETO, VILFREDO, *Traité de Sociologie Générale,* Paris; Payot et Cie, 1917, Chapter XII.

A systematic treatment of the "good" and "real" reasons for our actions and the place of a logico-experimental social science.

SYMES, LILLIAN, "The Great Fact-Finding Farce," *Harper's Monthly Magazine,* Vol. 164, February, 1932.

An indictment of the type of research from which no action flows.

VEBLEN, THORSTEIN, *The Place of Science in Modern Civilization,* New York; B. W. Huebsch, Inc., 1919.

A challenging view of science, its methods and aims.

WARD, LESTER F., *Applied Sociology,* Boston; Ginn & Company, 1906.

An early American view of sociology and the "conscious improvement of society."

WEBB, SIDNEY AND BEATRICE, *Methods of Social Study,* New York; Longmans, Green & Company, 1932, Chaps. I and XII.

Discussion of the province of sociology and the utility of science and investigation for human life.

YOUNG, ALLYN A., "Economics," in *Research in the Social Sciences,* New York; The Macmillan Company, 1929.

Riddling our present-day faith in research as a means of removing the imperfections of society.

PART II: SELECTED STUDIES

This bibliography of selected studies presents three kinds of books of special value to the social investigator. The first group deals with

books and articles that directly discuss research methods. The second consists of inquiries that include unusually frank and detailed discussions of the methods of investigation employed. The third list embraces volumes that present the results of significant inquiries in a clear and workmanlike fashion. Students are urged to read at least a few books of this type as they show concretely how competent investigators attack their problems.

To avoid referring to the same author in different places, the three lists have been combined.

The list is largely confined to works in English because of their greater accessibility.

Abbott, Edith, *Immigration: Select Documents and Case Records,* Chicago; University of Chicago Press, 1924.

Studies of immigrant cases from own documents.

Alexander, Franz, and Staub, Hugo, *The Criminal, the Judge and the Public. A Psychological Analysis,* translated by Gregory Zilboorg, New York, The Macmillan Company, 1931.

An exploration by psychoanalytic technique into the social problem of crime.

Allport, Gordon W., "The Composition of Political Attitudes," *American Journal of Sociology,* Vol. XXXV, No. 2, September, 1929, p. 220.

A study in the correlation of factors entering into the composition of conservative and radical attitudes of college students.

Anderson, Nels, *The Hobo,* Chicago; University of Chicago Press, 1923.

A study of the hobo by a "participant observer."

Arnold, Thurman W., "Progress Report on Study of Federal Courts," *American Bar Association Journal,* Vol. XVII, No. 12, December, 1931.

The statistical methods used in studying courts and court procedure in connection with reports of National Commission on Law Observance and Enforcement.

Baden-Powell, B. Henry, *The Indian Village Community,* London; Longmans, Green & Company, 1896.

A physical, ethnographic and historical study.

Bakkum, Glenn A., and Melvin, Bruce L., *Social Relations of Slaterville Springs—Brooktondale Area, Tompkins County, N. Y.,* Ithaca; Cornell University Agricultural Experiment Station, Bulletin 501, March, 1930.

Quantitative study of the social and economic organization of a village. Compare Galpin's original study.

BEARD, CHARLES A., *The Administration and Politics of Tokyo,* New York; The Macmillan Company, 1923.

A survey of Tokyo government and opinion, using varied techniques.

BOAS, FRANZ, *Changes in Bodily Form of Descendants of Immigrants,* Being a partial report on the results of an Anthropological Investigation for the United States Immigration Commission; Senate Document 208 (61st Congress, 2nd Session, 1910). (Abstract of the report on Changes in Bodily Form of Immigrants, Washington, 1911.)

Invaluable study of influence of change of environment on physical characteristics of individuals.

BOAS, FRANZ, "Limitations of the Comparative Methods of Anthropology," *Science,* Vol. IV, new series No. 103, December 18, 1896, p. 901.

BOAS, FRANZ, "The Methods of Ethnology," *American Anthropologist,* Vol. XXII, 1920, pp. 311-321.

BOAS, FRANZ, *The Mind of Primitive Man,* New York; The Macmillan Company, 1927.

The above contain the critical standpoint of the writer who has had probably the greatest influence on the methods and views of students of primitive social culture.

BOGARDUS, EMORY S., *The New Social Research,* Los Angeles, Jesse R. Miller, 1926.

A detailed discussion of the interview and life history methods of research.

BOOTH, CHARLES, *Life and Labour of the People in London,* London; The Macmillan Company, 1902 edition, 17 volumes.

Most elaborate study of actual social conditions in a large city.

BOWLEY, ARTHUR L., AND BURNETT-HURST, A. R., *Livelihood and Poverty,* London; G. Bell and Sons, 1915.

Chapter VI, "Criticisms of the Accuracy of the Results," deals with the method of sampling used in the study. Compare the economic conditions of these four towns in 1914 with the comparison of the Bowley-Hogg study of 1924.

BOWLEY, ARTHUR L., AND HOGG, MARGARET H., *Has Poverty Diminished?* London; P. S. King & Son, 1925.

Important both for methods and results as a study of the changed poverty line in England in comparison with similar studies made in 1914.

BOWLEY, ARTHUR L., AND STAMP, SIR JOSIAH, *The National Income 1924,* New York; Oxford University Press, American Branch, 1927.

Skillful handling of income estimates in small compass comparing English income in 1911 and 1924.

BRUCE, A. A.; BURGESS, E. W.; HARNE, A. J.; AND LANDESCO, J. A., "A Study of the Workings of Indeterminate Sentence Law and of Parole in the State of Illinois," *Journal of American Institute of Criminal Law and Criminology,* Vol. XIX, No. 1, Part 2, 1928.

A study of parole, and an attempt to predict future violations by statistical methods.

BRUNNER, EDMUND DES., *et al., American Agricultural Villages,* New York; Doubleday, Doran & Company, Inc., 1927.

A study of 140 villages in farm areas. See methodology of field study, Appendix A.

BRUNNER, EDMUND DES. *Surveying Your Community,* New York; Doubleday, Doran & Company, Inc., 1925.

Handbook of methods of studying the rural community and the rural church.

BUCK, JOHN L., *Chinese Farm Economy,* Chicago; University of Chicago Press, 1930.

Detailed study of farming methods on 2866 Chinese farms.

BURGESS, ERNEST W., "The Growth of the City: An Introduction to a Research Project," *Proceedings American Sociological Society,* Vol. XVIII, 1923, p. 85.

The study of the community from the angle of ecology and socio-economic expansion. References are given to monographic studies under way in the concrete analysis of Chicago as a type example. Compare Galpin.

BURNETT-HURST, ALEXANDER R., *Labor and Housing in Bombay,* London; P. S. King & Son, 1925.

Use of sampling methods in study of Bombay economic conditions.

BURT, CYRIL, *The Young Delinquent,* New York; D. Appleton-Century Company, 1925.

Important statistical study of multiple factors in delinquent and control groups of general population.

Business Cycle and Unemployment: report and recommendations of a Committee of the President's Conference on Unemployment, including an investigation made under the auspices of the National Bureau of Economic Research, New York; McGraw-Hill Book Company, 1923.

Careful study of the problem in the light of the first post-war depression.

CALHOUN, ARTHUR W., *Social History of the American Family,* Cleveland; A. H. Clark Company, 1917-18, 3 vols.

A radical sociological view of the family in American history.

CALVERTON, VICTOR F., "The Compulsive Basis of Social Thought as Illustrated by the Varying Doctrines of the Origin of Marriage and the Family," *American Journal of Sociology,* Vol. XXXVI, No. 5, March, 1931, p. 689.

A radical view that objectivity is impossible in research, except for details; interpretation is bound to be colored by the culture in which one thrives, be it bourgeois or Marxist.

CARPENTER, NILES T., *Immigrants and Their Children,* U. S. Bureau of Census Monographs VII, Washington, D. C.; Government Printing Office, 1927.

Analysis of Census figures of foreign born.

CHAPIN, F. STUART, *Field Work and Social Research,* New York; D. Appleton-Century Company, 1920.

The problems of field work and handling of data preliminary to more refined statistical analysis.

CITIZEN'S POLICE COMMITTEE, *Chicago Police Problems,* Chicago; University of Chicago Press, 1931.

A practical realistic study of the administrative functioning of the Police Department, and recommendations for improvement.

CLARK, WILLIAM; DOUGLAS, WILLIAM O.; AND THOMAS, DOROTHY S., "The Business Failures Project," *Yale Law Journal,* Vol. XXXIX, No. 7, May, 1930, p. 1015; and Vol. XL, No. 7, May, 1931, p. 1035.

The use of a varied sociological technique in connection with a new approach to the study of bankruptcy cases in the federal courts.

CLAY, HENRY, *The Post-War Unemployment Problem,* New York; The Macmillan Company, 1928.

Clear analysis of England's economic difficulties, handling a large number of factors.

CLEVELAND FOUNDATION, *The Cleveland Crime Survey,* 1922, directed by Roscoe Pound and Felix Frankfurter.

CLEVELAND FOUNDATION, *The Cleveland Education Survey,* 1915-16, directed by Colonel Leonard P. Ayres.

Two of the best-known and earliest of the specialized surveys.

COMMITTEE ON THE COST OF MEDICAL CARE, *Publications Nos. 1-28,* Washington, D. C.; Committee on Cost of Medical Care, 1928-31; Chicago; University of Chicago Press, 1931-33.

A five-year study of costs of medical care. See the research studies preceding the summary volume which aroused so much comment

because of the radical nature of its recommendations for socialized medicine.

DARWIN, FRANCIS (ed.), *Life and Letters of Charles Darwin,* New York; D. Appleton-Century Company, 1887, 2 vols.

See the autobiographical chapter for Darwin's methods.

DOUGLAS, PAUL H., *Real Wages in the United States 1890-1926,* Boston; Houghton Mifflin Company, 1930.

An impressive attempt to deal with inadequate data on a difficult subject.

DOUGLASS, H. PAUL, *How to Study the City Church,* New York; Doubleday, Doran & Company, Inc., 1928.

Methods used in surveying the church and its social backgrounds.

DOUGLASS, H. PAUL, *The St. Louis Church Survey,* New York; Doubleday, Doran & Company, Inc., 1924.

A survey of the social backgrounds of the church. See Appendix for methods of survey and house-to-house canvass.

DROBA, D. D., "Methods Used for Measuring Public Opinion," *American Journal of Sociology,* Vol. XXXVII, No. 3, November, 1931, p. 410.

Survey of the various methods used in studying opinion and attitudes.

DURKHEIM, EMILE, *De la Division du Travail Social,* Paris; Bibliothèque de Philosophie Contemporaine, 1893.

Important in indicating the place which the social and economic functions have in regard to social solidarity and social processes.

DURKHEIM, EMILE, *Les Règles de la Méthode Sociologique,* Paris; F. Alcan, 1919, 7th edition.

The methods of the Durkheim school.

ELMER, MANUEL C., *Technique of Social Surveys,* Los Angeles; Jesse Ray Miller, 1927 edition.

The methods of the survey.

ELY, RICHARD T., "Pullman: A Social Study," *Harper's Monthly Magazine,* Vol. LXX, February, 1885.

A social study of a benevolent company town.

ENGEL, ERNST, "Die Lebenskosten," *Bulletin of the International Institute of Statistics,* Vol. IV, 1895.

One of the classical researches into the standard of living.

Essays on Research in the Social Sciences, Washington, D. C.; The Brookings Institution, 1931.

A number of lectures by Beard, Schlesinger, Swann, Cook, Llewellyn, Bentley, Ogburn and Thomas on the contributions of the various sciences to method.

EZEKIEL, MORDECAI, "A Method of Handling Curvilinear Correlation for any Number of Variables," *Journal of American Statistical Association,* Vol. XIX, new series No. 148, December, 1924, p. 431.

Use of partial correlations when the interrelations are not to be described as linear.

FERNALD, MABEL R.; HAYES, MARY H. S.; AND DAWLEY, ALMENA, *A Study of Women Delinquents in New York State,* New York; D. Appleton-Century Company, 1920.

See statistical chapter by Beardsley Ruml.

FLEXNER, ABRAHAM, *Report of Medical Education in the United States and Canada,* New York; Carnegie Foundation for the Advancement of Teaching, 1910.

Analysis of medical education, with appraisals of each medical school in the United States and Canada.

FLORENCE, PHILIP SARGENT, *Methods for the Field Study of Industrial Fatigue,* U. S. Public Health Service, Washington, D. C.; Government Printing Office, 1919.

A manual for field workers in industrial health.

FORTUNE, R. F., *The Sorcerers of Dobu,* New York; E. P. Dutton & Co., Inc., 1932.

A notable study in social anthropology.

FRANK, JEROME, *Law and the Modern Mind,* New York; Brentano's, 1930.

A challenging attack on the legal search for certainty in general principles.

FRANKFURTER, FELIX, AND GREEN, JEROME, *The Labor Injunction,* New York; The Macmillan Company, 1930.

An example of the methods of legal research through analysis of cases and their background.

FRY, C. LUTHER, *Diagnosing the Rural Church,* New York; Doubleday, Doran & Company, Inc., 1924.

Methods for studying the rural church and the use of a new unit of measurement of attendance.

GALPIN, CHARLES J., "Social Anatomy of a Rural Community," *Research Bulletin No. 34,* Wisconsin Agricultural Experiment Station, 1915.

A pioneer attempt to make a study of the functional groups in a rural community.

GEDDES, PATRICK, AND MEARS, F. C., *Civic Survey of Edinburgh,* Edinburgh; Outlook Tower, 1911.

History and social conditions of Edinburgh, with enlightened plans for the future.

GIDDINGS, FRANKLIN H., *The Scientific Study of Human Society,* Chapel Hill, N. C.; The University of North Carolina Press, 1924.

Emphasizes particularly the quantitative analysis of social data.

GLUECK, SHELDON S. AND ELEANOR T., *Five Hundred Criminal Careers,* New York; Alfred A. Knopf, 1930.

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